VALI AZHAL KEEL VAYU

(DISSERTATION SUBJECT)

For
the partial fulfillment of the requirements to the Degree of

DOCTOR OF MEDICINE [SIDDHA]

BRANCH III – SIRAPPU MARUTHUVAM

THE TAMILNADU DR.M.G.R MEDICAL UNIVERSITY, CHENNAI – 600 003

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INTRODUCTION

Birth without deformity and life without disease is a boom to human race. It can be established by the following lines,

"அரிது அரிது மானிடராய் பிறத்தல் அரிது - அதனினும்
அரிது கூன் குருடு செவிடு நீங்கி பிறத்தல் அரிது.

- ஔவையார்

Health is a positive states of well being that is to say every organ of the body functioning normally and perfect functional balance with every other organ.

The condition of the locomotor system is also one of the state of health. The locomotor system includes the muscles, bin the ones, joints and soft tissue structure such as tendons, ligaments.

Medicine as everyone knows is not merely a science but an art as well.

Siddha system is based on Truth and Philosophy according to this system of medicine, man and nature are inseparable and interdependent.

It is not only curative but also possess preventive, Rehabilitation and Rejuvenation aspect of its own than other systems of medicine in the world.

This system has the unique features like removal of the root cause of the disease and perfect remedies for body, mind and soul.

There are many ways to attain the eternal world such as Gnana margam and Kanma margam. Human body is considered to be the media. Further we must have disease less life.

Siddha system of medicine is dedicated bequest of siddhars cheerfully given to the human society to live long and free from disease.

"ஆயுள் மாமறை யேமறை யாமெவ்வா றென்னின்
ஆயவீடடை வோர்கள்மா னிடர்களே யல்லாமல்
ஏற வேறிலை யவருடல் வீந்திடா தியற்றத்
தூய நன்மருந் துரைத்தலா லாமெனச் சொல்வாய்"

- தேரையர்

If the natural harmony of the Threethathu becomes altered and this disequilibrium causes various diseases.

Dysharmony of Threethathu may be due to arusuvaigal, climatic changes and habits of the individual.

In the present circumstances with the high level of environmental degradation, westernized life style and scant regard for social and moral values, it is impossible to maintain healthy life. Among the three dhosas vatham is placed first.

In Yugi munivar's "Vaidhya Chindamani" vatha diseases are classified into 80 types. Keelvayu comes under the 80 types of vatha diseses. In the text book of siddha maruthuvam keelvayu is further divided into 10 types.

Vali azhal keel vayu comes under in this 10 subdivisions.

Author had selected Vali Azhal Keel vayu for the clinical study of the dissertation work which correlate with Rheumatoid Arthritis in modern aspect, on the basis of the siddha concept, the course of the disease, diagnosis and treatment.

The author had chosen the drug Mudakkuvatha Chooranam as internal medicine and vatha thylam as external. As it is a herbal formulation it is purely safe and free from adverse effects.

The author hopes that this dissertation work will help the sufferers of Vali azhal keel vayuin giving new modality of treatment.

This is only a preliminary study.

AIM AND OBJECTIVE

Aim

Rheumatoid Arthritis is not only a polyarthiritis, and the name Rheumatoid disease is preferable since it directs attention to whole patient and not just the joints.

Vali azhal keel vayu is a disease which causes so much suffering because of the tendency of crippling without killing. Most of the patients are unable to do their day today activities independently. The mean age of onset of Rheumatoid Arthritis is 40 years. Hence it affects the people in their active period of their life.

Since about majority of the clinical outcomes in today's medical world pertain to musculoskeletal disorders, lot of interest has been developed in this field.

Complete remedy for this disease has not yet been arrived at all. Here this study was carried out with an intention to formulate an ideal treatment for the Vali azhal keel Vayu.

This being a preliminary endeavor by the author, as if it would be a helping hand to the sufferers. With this view, the dissertation subject was under taken.

Objectives

- To study the clinical cause of the disease Vali azhal keel vayu with observation on the Aetiology, Pathology, Diagnosis, Prognosis, complications and treatment by making use of Siddha aspect.
- To expose the unique diagnostic method mentioned by siddhars, to know how the disease Vali azhal keel vayualters the normal

conditions of the body under the topic Mukkutram, Poripulangal, Ezhu Udal Kattukal and Envagai Thervugal.

- To know the extend of correlation of Aetiology, classification, signs and symptoms of Vali azhal keel vayu in Siddha Aspect with Rheumatoid Arthritis in modern medicine.
- To have detailed clinical investigaion.
- To have a clinical trial on Vali azhal keel vayu with **Mudakku Vatha Chooranam** as internal medicine and **Vatha thylam** as external medicine.
- To evaluate the biochemical and pharmacological effects of trial medicine.
- To use modern parameters to confirm and prognosis of the disease.

ABSTRACT

The author had chosen the disease Vali azhal keel vayu for the dissertation subject because it is one of the disorder which affects the individuals in higher incidence. It's increased occurrence in recent times is due to stress, strain and abnormal dietary habits.

The inscriptions mentioned in the siddha literature about this disease and therapeutics impressed the author very much.

The disease is correlated with rheumatoid Arthritis as mentioned in modern medicine.

The author diagnosed the disease by using siddha parameters like Envagai Thervugal, Kaalam, thinai, Mukkutra Verupadugal and modern parameters like laboratory investigations. 40 patients in either sex had been selected by the author both as in inpatients (20) and out patients (20) and they were administered with the trial medicines.

- Mudakkuvatha Chooranam – 650 mg to 1300 mg thrice a day (Internal)
- Vatha Thylam – External Application
- The trial medicines are subjected to biochemical and pharmacological analysis.

SIDDHA ASPECT

Å¡¾õ

¯¼õÀ¢üÌ Â¡|¾¡Õ ¾£íÌõ §¿Ã¢¼¡¾ÀÊ «ÏòÐÅ åÀÁ¡ö ¯¼ø ±íÌõ ÀÃÅ¢ ¾¡Ðì¸¨Ç ±øÄ¡õ À¡Ð¸¡ìÌõ µ÷ Å¢¾ °ì¾¢. þÐ ¯ó¾¢Â¢ý ¸£ú À¢ÈóÐ ¯¼õÒ ÓØÅ¾¢Öõ ÀÃÅ¢ ÍÅ¡°õ, À°¢, ¾¡¸õ Ó¾Ä¢Â¨Å¸ÙìÌ ¬¾¡ÃÁ¡¸ þÕóÐ |¸¡ñÎ ÀÄ Å¢¸¡Ãí¸¨Ç ²üÀÎò¾¢ì |¸¡ñÊÕìÌõ ÓôÀ¢½¢¸Ç¢ø ´ýÚ. Å¡¾õ ¾ýÉÇÅ¢ø «¾¢¸Ã¢ìÌõ §À¡Ð ¿ÃõÒ ÐÅ¡Ãí¸Ç¢ø |¸ð¼ ¿£÷ ¾í¸¢ ¾¨°Â¢ø °È¢ °÷Å¡í¸ò¨¾Ôõ ÀüÈ¢ ¿¢üÌõ µ÷ §¿¡Â¡Ìõ.

þÐ ÓôÀ¢½¢¸Ç¢ø Ó¾ý¨ÁÂ¡É¾¡Ìõ. Å¡¾õ ¯¼ø ÓØÅÐõ ÀÃÅ¢ Å¡úÀ¨Å ±É¢Ûõ À¡¾ Ó¾ø ¯ó¾¢ Å¨Ã ÀÃÅ¢ þÂì¸ |°Âø¸¨Çî |°öÔõ. þ¨¾ ¸£ú¸¡Ïõ À¡¼ø ãÄõ «È¢ÂÄ¡õ.

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«Ïì¸û |Áöô|À¡Õû ¸¡Ã£Â ÁÆ¢|À¡Õû

±Éô Ò¸ýÈ¢ÕôÀ¾¡ø Å¡¾ò¾¢ý þÂü¨¸ÅÊÅõ Ññ¨Á (அணுத்துவம்), |¿¡ö¨Á¸Ç¡Ìõ. §ÁÖõ þÂì¸õ, ¾ðÀõ, |Åõ¨Á, ´ôÀÃÅ¢ý¨Á ¬¸¢Â¨Å Å¡¾ò¾¢ý ¾ý¨Á¸Ç¡Ìõ.

Å¡¾õ Å¡ØÁ¢½õ

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±ýÚ ÜÈôÀðÎûÇÐ.

- «À¡Éý
- þ¼¸¨Ä
- ¯ó¾¢Â¢ý ¸£ú ãÄõ
- ±ÖõÒ
- ¸¡Ð
- |¾¡¨¼
- §¾¡ø
- þÎôÒôÀÌ¾¢
- ¾¨°
- ¿ÃõÒ
- ãðÎ¸û
- ÁÂ¢÷ì¸¡ø¸û
- ÁÄõ

Å¡¾ò¾¢ý þÂü¨¸ô ÀñÒ¸û

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- ãîÍ Å¢¼ø, Å¡í¸ø
- ÁÉ|Á¡Æ¢ |Áö¸ÙìÌî |°Â¨Äò ¾Ãø
- ÁÄõ Ó¾Ä¢Â À¾¢É¡ýÌ §Å¸í¸¨Ç |ÅÇ¢ôÀÎò¾ø
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¬¸¢ÂÅüÈ¢ø ¯¼üÌ Ð¨½ ÒÃ¢¾§Ä ÅÇ¢Â¢ý þÂü¨¸ ÀñÀ¡Ìõ.

Å¡¾õ ¯¼Ä¢ø ÒÃ¢Ôõ ¦¾¡Æ¢ø

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- ¯¼ø §¿¡¾ø
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- À¢Çò¾ø §À¡ýÈ ÅÄ¢
- ¿ÃõÒ ÌýÈø
- ¿Îì¸ø
- ÁÉ þÚì¸Á¡¾ø
- ¿£÷ôÀ¨°Â¢ý¨Á
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- ¾Ê Ó¾Ä¢ÂÅüÈ¡ø «ÊÀð¼Ð §À¡ýÈ §Å¾¨É
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- ÁÂ¢÷ì Üî¦°È¢¾ø
- ¨¸, ¸¡ø¸¨Ç ¿£ð¼×õ, Á¼ì¸×õ ÓÊÂ¡¨Á
- ¿£÷ §Åð¨¸
- ¦¸ñ¨¼ì¸¡ø, ¦¾¡¨¼ Ó¾Ä¢ÂÉ ¦¿¡Úí¸¢ô §À¡ÅÐ §À¡Ä ÅÄ¢
- ¨¸,,¸¡ø ¦°Âø þÆò¾ø
- ÁÄõ °¢Ú¿£÷ Ó¾Ä¢ÂÉ ¾¨¼ÀÎ¾ø
- ±îÍ¨ÅÔõ ÐÅ÷ôÀ¡Â¢Õò¾ø
- Å¡ö ¿£åÈø
- §¾¡ø, ÁÄõ, ¿£÷ Ó¾Ä¢ÂÉ ¸ÚòÐì ¸¡½ø

Í¨ÅìÌõ, Å¡¾ò¾¢üÌõ ¯ûÇ ¦¾¡¼÷Ò

"ÒÇ¢òÐÅ÷ Å¢ïÍí¸È¢ Â¡ü âÃ¢ìÌõ Å¡¾õ"

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Å¡¾ò¨¾ «¾¢¸Ã¢ì¸î ¦°öÔõ Í¨Å¸Ç¡ÅÉ ÒÇ¢ôÒ, ÐÅ÷ôÒ.

"Å¡¾ §ÁÄ¢ð¼¡ø ÁÐÃõ ÒÇ¢ÔôÒ
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Å¡¾ò¨¾ °ÁôÀÎòÐõ Í¨Å¸Ç¡ÅÉ þÉ¢ôÒ, ÒÇ¢ôÒ, ¯Å÷ôÒ.

Å¡¾ §Ã¡¸í¸Ç¢ý þÕôÀ¢¼õ

"±ñÀÐ Å¡¾Á¡Ì Á¢ÕÅ¨¸ô ÀÌòÐì ¸¡½¢ø
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- «¸ò¾¢Â÷ 2000

Å¡¾ §Ã¡¸Á¡ÉÐ þÎôÒìÌ §Áø ¿¡üÀÐ, þÎôÒìÌì ¸£ú ¿¡üÀÐ ±ýÚ þÕÅ¨¸Â¡¸ô ÀÌì¸ôÀÎ¸¢ÈÐ.

Å¡¾ §¿¡öì¸¡É þÂø

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¯¼ø ¿Îì¸õ, ¿ÃõÒ ¾Ç÷î°¢, ãðÎ¸Ç¢ø ÅÄ¢, ¯¼ø ÌÇ¢÷¾ø ÁüÚõ Å£ì¸õ ¸¡Ïõ.

"«È¢Â¾¢õ ãýÈ¢É ¾¡ñ¨Á |°¡ýÉ¡÷¿ó¾¢
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- ¾¢ÕãÄ ¿¡ÂÉ¡÷

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ÅÂ¢Ú ¦À¡ÕÁø, þÎôÒ, ¨¸, ¸¡ø °óÐ¸Ç¢ø ÅÄ¢, ÁÄõ, ¿£÷ °¢ÚòÐ ¸ÎòÐ þÈíÌõ.

Å¡¾ §¿¡öì¸¡É ¸¡Ã½í¸û

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[ÅÇ¢Âõ - Å¡¾õ]

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À¡¦ÉýÈ À¸ÖÈì¸ Á¢Ã¡Å¢Æ¢ôÒ

ÀðÊÉ¢§Â Á¢¸×Ú¾ø À¡Ã ¦Áö¾ø
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Å¡¾õ «¾¢¸Ã¢ìÌõ ¸¡Äõ

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¸¡Äõ

ÓÐ§ÅÉ¢ø ¸¡Äõ (¬É¢ Ó¾ø ¬Ê Å¨Ã)

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¸¡Äõ

¸¡÷ ¸¡Äõ (¬Å½¢ Ó¾ø ÒÃð¼¡°¢ Å¨Ã)

¾ýÉ¢¨Ä «¨¼¾ø

ÓìÌüÈí¸Ùõ ¾ò¾õ þ¼í¸Ç¢ø þÂü¨¸Â¡ö ¿¢¨ÄôÀÎÅ¾¡Ìõ.

¸¡Äõ

Ü¾¢÷ ¸¡Äõ (³ôÀ°¢ Ó¾ø ¸¡÷ò¾¢¨¸ Å¨Ã)

Å¡¾§¿¡ö - ¦À¡Ð ÌÈ¢Ì½í¸û

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§°¡÷Å¨¼ó¾ Å¡ÔÅ¢É¡ø §¾¸¦ÁíÌõ
¦ÁøÄ ¨¸¸¡ø «°¾¢Ôñ¼¡Ìõ
¦ÁöÓ¼íÌõ ¿¢Á¢Ã ¦Å¡ñ½¡ò ¾¢Á¢÷ ¯ñ¼¡Ìõ
- «¸ò¾¢Â÷ ¿¡Ê

"Å¡¾Å£Ú «ýÉÁ¢È¡¸Ð ¸ÎôÒñ¼¡õ Åñ½Óñ¼¡õ
§Á¡Ð ¸ðÎ§Ã¡¸õ ÍÃÓñ¼¡ Á¢ÕÁÖÁ¡ ÓÈí¸¡¦¾ýÚ
µÐ ÝÃ¢Â Å¡¾ÁÉÄ¡Ì ¿Îì¸Óñ¼¡õ ¦À¡Õû¸Ç¡öó
¾£¦¾É§Å ¿ÃõÀ¢°¢òÐ °óÐ¸û §¾¡Úí ¸¢ÎìÌó ¾¡§É"
- §¾¨ÃÂ÷ Å¡¸¼õ

À°¢Â¢ý¨Á, ¯¼ø ¸ÎôÒ, ÍÃõ, þÕÁø, ¯Èì¸Á¢ý¨Á, ¯¼ø ¿Îì¸õ, ¿ÃõÒò ¾Ç÷î°¢, °óÐ¸û §¿¡¾ø, ¯¼ø ÌÇ¢÷¾ø, Å£ì¸Óñ¼¡¾ø §À¡ýÈ ÌÈ¢Ì½í¸û ¯ñ¼¡Ìõ.

¸£ø Å¡Ô

þÂø

"ÅÇ¢Ô ¨ÁÔó ¾ýÉ¢¨Ä ¦¸ðÎ
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¾¡í¦¸¡½¡ ÅÄ¢Ô¼ý ¦¿¡ó¾¢Î Áõ§Á"
- °À¡À¾¢ ¨¸§ÂÎ

¸£ø¸Ç¢ø Å£íÌÅÐ, ÌòÐÅÐ, §¿¡ÅÐ Ó¾Ä¢ÂÅü¨È ¯ñ¼¡ì¸¢ Á¼ì¸×õ, ¿£ð¼×õ, «¨°ì¸×õ ´ð¼¡Áü ¦°öÐ ÀÎì¨¸Â¢ø þÕò¾¢, ³ÂÓõ ÜðÊ ÍÃ Ó¾Ä¢Â Ð¨½ §¿¡ö¸¨ÇÔõ ¯ñ¼¡ìÌõ þÂøÒ¨¼ÂÐ.

§ÅÚ ¦ÀÂ÷¸û

°óÐ ÅÄ¢, ãðÎ ÅÄ¢, §Á¸ Ý¨Ä, Ó¼ìÌ Å¡Ô, ¬Á Å¡¾õ.

¦ÀÂ÷ì ¸¡Ã½õ

¸£øÅ¡Ô - ¸£ø¸Ç¢ø ÅÇ¢ìÌüÈõ ÜÊ §¿¡¨Â ¯ñ¼¡ìÌÅ¾¡ø

ãðÎÅÄ¢ - ãðÎ¸Ç¢ø §¿¡¨ÂÔñ¼¡ìÌÅ¾¡ø

§Á¸Ý¨Ä - §Á¸ò¾¢ý ¦¾¡¼÷Ò §¿¡Â¡¸ ÅÕÅ¾¡ø

Ó¼ìÌÅ¡Ô - ãðÎ¸¨Ç Ó¼ì¸¢ ¨ÅôÀ¾¡ø

¬ÁÅ¡¾õ - ÅÂ¢üÈ¢ø Áó¾õ ¯ñ¼¡¸¢ ³Âò¨¾ô ¦ÀÕì¸¢ §¿¡ö ¯ñ¼¡Å¾¡ø

¸£øÅ¡ÔÅ¢ý Å¨¸¸û

°¢ò¾ ÁÕòÐÅ áÄ¢ø ÓìÌüÈ «ÊôÀ¨¼Â¢ø ÀòÐ Å¨¸Â¡¸ Å¨¸ôÀÎò¾ôÀðÎûÇÐ.

- ÅÇ¢ ¸£øÅ¡Ô
- «Æø ¸£øÅ¡Ô
- ³Â ¸£øÅ¡Ô
- ÅÇ¢ «Æø ¸£øÅ¡Ô
- ÅÇ¢ ³Â ¸£øÅ¡Ô
- «Æø ÅÇ¢ ¸£øÅ¡Ô
- «Æø ³Â ¸£øÅ¡Ô
- ³Â ÅÇ¢ ¸£øÅ¡Ô
- ³Â «Æø ¸£øÅ¡Ô
- ÓìÌüÈ ¸£øÅ¡Ô

¬òÁ Ãð°¡Á¢÷¾ ¨Åò¾¢Â °¡Ã °í¸¢Ã¸õ" ±ýÛõ áÄ¢ø À¾¢¦ÉðÎ Å¨¸ ¸£øÅ¡Ôì¸û ¸¡½ôÀÎ¸¢ýÈÉ.

¾¢ÕãÄ÷ ¸Õì¸¨¼ ¨Åò¾¢Â ¸¡Å¢Âõ 600 ø ¬Ú Å¨¸Â¡¸ Å¨¸ôÀÎò¾ôÀðÎûÇÐ.

«¸ò¾¢Â÷ Ì½Å¡¸¼ò¾¢ø ¬Ú Å¨¸Â¡¸ Å¨¸ôÀÎò¾ôÀðÎûÇÐ.

ƒ£ÅÃð°¡Á¢÷¾ò¾¢ø ²Ø Å¨¸Â¡¸ Å¨¸ôÀÎò¾ôÀðÎûÇÐ.

§¿¡ö ÅÕõ ÅÆ¢

- ÅÇ¢ìÌüÈò¨¾ àñÎõ ¯½×¸û (Å¡¨Æì¸¡ö,¯Õ¨Çì¸¢ÆíÌ)
- ÌÇ¢÷î°¢ ¾Õõ ¦À¡ÕÛ¸û ¯ñ½ø
- ÌÇ¢÷ ¸¡üÈ¢Ä£ÎÀ¼ø
- Á¨ÆÂ¢ø ¿¨É¾ø
- ÀÉ¢Å¡¨¼Â¢ø ÀÎò¾¢Õò¾ø
- ¯Â÷ó¾ Á¨ÄÂ¢ø ¾íÌ¾ø

"ÅÇ¢¾Õ ¸¡ö¸¢ ÆíÌ Å¨ÃÅ¢Ä¡ ¾Â¢Äø§¸¡¨Æ
ÓÇ¢¾Â¢÷ §À¡ýÁ¢ ÌìÌ Ó¨ÈÂ¢Ä¡ ×ñÊ §¸¡¼ø
ÌÇ¢÷¾Õ ÅÇ¢Â¢ü §È¸í ÌÉ¢ôÒÈ ×ÄÅø ¦ÀñÊ÷
¸Ç¢ò¾Õ ÓÂì¸õ ¦Àü§È¡÷ ¸Ê ¦°Âø ¸ÕÅ¢Â¡Á¡ø"
- °À¡À¾¢ ¨¸§ÂÎ

ÓüÌÈ¢¸û

ãì¸¨¼ôÒ, ãì¸¢ø ¿£÷ À¡ö¾ø, ¦¾¡ñ¨¼ì ¸ð¼ø, °¢ÚÍÃõ, ¨¸¡ø §¿¡¾ø, Ìò¾ø , Ì¨¼¾ø ±ýÛõ ÓüÌÈ¢¸¨Çì ¸¡ðɬ À¢ý §¿¡ö ¦¾¡¼íÌõ.

ÅÇ¢ «Æø ¸£øÅ¡Ô

ÌÈ¢Ì½í¸û

"Å¡¾À¢ò¾ ¸£øÅ¡ÔÅ¢ý ÅÕíÌÈ¢ °¡üÈì §¸Ç¡ö
²¾Á¡÷ Áó¾§ÁôÀõ þ¨Ãî°Öõ ÅÂ¢üÈ¢ü ¸¡Ïõ
µ¾Õí Ìò¾ø Å£ì¸õ µö¾Ä¢ø ±Ã¢î°Öñ¼¡õ
¸¡¾Ú ÓÈì¸ Á¢ý¨Á ¸¡öî°Öí ¸¡Ïí ¸ñ¼¡ö"
- °À¡À¾¢ ¨¸§ÂÎ

¯ñ¼ ¯½× ¦°Ã¢Â¡Áø ÒÇ¢ò¾ ²ôÀõ ¯ñ¼¡¾ø, ÅÂ¢üÚû ¸¡üÚì ÜÊ «Êì¸Ê ¸¡üÚô ÀÃ¢¾ø, ÁÄì¸ðÎ, ¯¼ø ¦ÀÕò¾ø ±ýÛí ÌÈ¢ Ì½í¸¨Çì ¸¡ðÊ Á½¢ì¸ðÎ, ¸Ïì¸¡ø Å¢Ãø¸û, ¬¸¢Â ¸£ø¸Ç¢ø °¢ÅóÐ ±Ã¢î°¨ÄÔõ, ÅÄ¢¨ÂÔõ ¯ñ¼¡ìÌõ, àì¸Á¢ý¨Á, ÀÎì¨¸Â¢ø ¿¢¨ÄÂ¡Áø ÒÃÇø, °¢Ú ÍÃõ Ó¾Ä¢Â ÌÈ¢¸Ùõ ¸¡Ïõ.

"¬¸¡¾ Å¡¾Óõ À¢ò¾Óõ Ý¨ÄÂ¡õ
Å¡¸¡É ¨¸ ¸¡ø ÅÇÁ¡öì ¸Ã§¼Úõ
¾¡¸¡É §ÁÉ¢¾É¢ø ¦ÅÊôÒñ½¡Ìõ
§À¡¸¡ÁÉ¢ýÚ Ò½÷î°¢Â¡ø ¦¸¡øÖ§Á"
- «¸ò¾¢Â÷ Ì½Å¡¸¼ò ¾¢ÃðÎ

"¨¸ ¸¡ø¸û ¦À¡ÕóÐ¸Ç¢ø ¸ÃÎ¸ðÊ §ÁÉ¢ ¦ÂøÄ¡õ
¾ÊòÐ Òñ½¡õ Å¡¾ À¢ò¾ Ý¨Ä ±ÉôÀÎõ"

- ¨Åò¾¢Â °¡Ã °í¸¢Ã¸õ

"ÅÇ¢ÂÐ ¸ÏÅ¢¨¼ ¿¢üÌÁ¡Â¢ý
¸Ïì¸û Å£í¸Öõ Ìò¾Öó §¾¡ýÚõ
¸¡ü¦ÀÕ Å¢ÃÄ¢¨¼ò §¾¡ýÈ¢ô ÀÃ×õ
ÅÇ¢Ô ÁÉÖí ¸ÄóÐ °¢ÉÅÄ¢ý
¯¼õÒ ¸É¦ÄÉì ¸¡ó¾ø §¿¡¾ø
¸¡üÚ Å£°¢Ûõ ¦À¡Úò¾ ÄÕÙõ
«Ã¢¾¢ý Å£í¸Öõ §¾¡ýÈ¢Î ¦ÁýÀ
¾É¢ôÀÎ ÓÚôÀ¢Ûó §¾¡ýÚÁÐ§Å"

- Á¡ýÓÕ¸¢Âõ

¾£Õõ ¾£Ã¡ ¿¢¨Ä

ÅÇ¢ «Æø ¸£øÅ¡Ô §¿¡Â¡ÉÐ ±Ç¢¾¢ø ÁÕòÐÅò¾¢üÌ «¼í¸¡ÁÖõ, ÁÕòÐÅò¾¢üÌ «¼í¸¢Ûõ Á£ñÎõ ÅÕÅÐÁ¡ö þÕóÐ, «ì¸£ø¸û ¸ÃÎ ¸ðÊÉÐ §À¡Ä ¿£ð¼×õ Á¼ì¸×õ ÓÊÂ¡¾ Åñ½õ ¿¢¨ÄòÐÅ¢¼î ¦°öÅÐÓñÎ.

பிணியறிமுறைமை

"பிணியறிமுறைமை" என்பது உடலைப் பிணித்தலாய நோயைத் தெரிந்து கொள்ளுகிற ஒழுக்கம் எனப்படும்.

விதியும் ஒழுக்கமும்

- பொறியாற்றேர்தல்
- புலனாலறிதல்
- வினாதல்

என்னும் விதிகளையும் அவற்றைத் துணையாகப் பற்றி ஒழுகும் ஒழுக்கங்களையும் குறிக்கும்.

பொறிகள்

1. மெய்
2. வாய்
3. கண்
4. மூக்கு
5. செவி

புலன்கள்

1. ஊறு
2. சுவை
3. ஒளி
4. நாற்றம்
5. ஓசை

நோயாளியின் பொறி மற்றும் புலன்களை மருத்துவர் தனது பொறி மற்றும் புலன்களால் சோதித்து அறிதலாகும்.

வினாதல்

வினாதல் என்பது கேட்டறிதல். மருத்துவன் தன்னை நோக்கி வந்த பிணியுற்றவனைப் பற்றி அறிய வேண்டியவற்றை அறிந்தும், தன்பொறி, புலன்களால் பிணியாளனுடைய பொறி, புலன் வழியாய் உணர்வதைக் கேட்டும், பிணியாளி எக்காரணத்தினாலோ தான் கேட்பதைச் சொல்லுதவற்கு இயலாதவனாயிருப்பின் அவன் சுற்றத்தாரைக் கொண்டு அறியக் கூடியவற்றை அறிந்தும் பிணியைக் கணித்தல்.

எண்வகைத் தேர்வு

எண்வகைத் தேர்வு என்பது பிணியை அறியும் வழி.

” ***நாடி ஸ்பரிசம் நா நிறம் மொழி விழி***
மலம் மூத்திரமிவை மருத்துவராயுதம்”

- தேரன்

“தொடுக்கலுற்ற அட்டவிதப் பரீட்சை தன்னை
துலக்கமுறும் பண்டிதரே தெளி வதாகப்
பகுக்கரிய **நாடி**யை நீ பிடித்துப் பாரு
பகர்கின்ற **வார்த்தை** பார் **நா**வைப் பாரு
வளமான சரீரத்தின் **நிறத்தைப்** பாரு
சகிக்கரிய **மலத்தைப்** பார் **சலத்தைப்** பாரு
சார்ந்த **விழி**தனைப் பார்த்து தெளிவாய் காணே ”

- அகத்தியர் வைத்திய வல்லாதி 600

எண்வகைத் தேர்வுகள்

- நாடி

- ஸ்பரிசம்
- நா
- நிறம்
- மொழி
- விழி
- மலம்
- மூத்திரம

1. **நாடி (Pulse)**

வாதாதி முத்தோடங்களின் குணா குணங்களை நமது விரல்களால் ஆரை ரத்தக் குழாயின் மேல் வைத்து அழுத்தியும் தளர்த்தியும் பார்க்கும் போது ஏற்படும் துடிப்பு.

"கரிமுகனடியை வாழ்த்திக் கைதனில் நாடிபார்க்கில்
பெருவிரலங்குலத்தில் பிடித்தடி நடுவே தொட்டால்
ஒரு விரலோடில் வாதமுயர் நடுவிரலிற் பித்தம்
திருவிரல்மூன்றிலோடில் சேத்தும நாடிதானே "

மூவிரல்களால் நாடி நடையை ஆராயும் போது ஆள்காட்டி விரலுணர்த்துவது வாதம் எனவும், நடு விரலிலுணர்த்துவது பித்தமெனவும் ஆழி விரலிலுணர்த்துவது ஐயமெனவும் அறிக. வாதம், பித்தம், கபம் இவற்றின் மாத்திரையளவு முறையே 1: 1/2 : 1/4 இந்த மாத்திரையளவில் இவை மாறுபடும் போது நோய்நிலை அறியப்படுகிறது.

வளி அழல் கீல்வாயுவில் வாதகலப்பு நாடி உணரப்படுகிறது.

2. ஸ்பரிசம் (தொட்டுப்பார்த்தல்)

வளி அழல்கீல் வாயுவில் பாதிக்கப்பட்ட பகுதி சூடாகவும் வீக்கம் மற்றும் வலியுடன் காணப்படுகிறது.

3. நா (Tongue)

வளி அழல் கீல் வாயுவில் நாவானது மாப்படிந்து, வெளுத்துக் காணப்படுகிறது.

4. நிறம்

வளி அழல் கீல் வாயுவில் ¿¢Ẽõ þÂøÀ¡, ¯ûÇÐ.

5. மொழி

வளி அழல் கீல் வாயுவில் நோயாளியின் பேச்சுத் தாழ்ந்த ஒலியாக கேட்கப்படுகிறது.

6. விழி

வளி அழல் கீல் வாயுவில் விழி இயல்பாகக் காணப்படுகிறது.

7. மலம்

வளிஅழல் கீல் வாயுவில் மலக்கட்டு காணப்படுகிறது.

8. மூத்திரம்

இப்பரிசோதனையில் நீர்க்குறி மற்றும் நெய்க்குறி ஆகியவை அடங்கும்.

நீர்க்குறி

- நிறம்
- எடை
- மணம்
- நுரை
- எஞ்சல்

நெய்க்குறி

பார்க்கும் முறை

"அருந்துமா றிரதமும் அவிரோ தமதாய்
அ·கல் அலர்தல் அகாலவூண் தவிர்ந்தழற்
குற்றளவருந்தி உறங்கி வைகறை
ஆடிக் கலசத் தாவி யேகாது பெய்
தொருமுகூர்த் தக்கலைக் குட்ப டுநீரின்
நிறக்குறி நெய்க்குறி நிரூமித்தல் கடனே "

- தேரையர்

வாத நீர்

"அரவென நீண்டின·தே வாதம்" (அரவு-பாம்பு)

பித்த நீர்

”ஆழிபோல் பரவின் அ·தே பித்தம்” (ஆழி-மோதிரம்)

கப நீர்

”முத்தொத்து நிற்கின் மொழிவதன் கபமே”

தொந்த நீர்

”அரவிலாழியும் ஆழியில் அரவும்
அரவின் முத்தும் ஆழியில் முத்தும்
தோற்றில் தொந்த தோடங் களாமே”

முக்குற்ற நீர்

நீரில் விட்ட நெய்த்துளி அமிழ்ந்தால் அது முக்குற்ற நீராகும்..

பிற பரிசோதனை முறைகள்

- ❖ ஞானேந்திரியங்கள்
- ❖ கன்மேந்திரியங்கள்
- ❖ உயிர்த்தாதுக்கள்
- ❖ ஏழு உடற்கட்டுகள்
- ❖ பருவகாலங்கள்
- ❖ திணை
- ❖ உடல் வன்மை

I. ஞானேந்திரியங்கள்

வளி அழல் கீல் வாயுவில் ஞானேந்திரியங்கள் இயல்பாக காணப்படுகின்றன.

II. கன்மேந்திரியங்கள் (ஐந்து தொழில் உறுப்புகள்)

வளி அழல் கீல் வாயுவில் கை, கால் பாதிப்படைந்துள்ளது.

III. உயிர்தாதுக்கள்

வாதம்

வாழுமிடம்

அபானன், மலம், இடகலை, உந்தியின் கீழ்மூலம், காமக்கொடி, இடுப்பு எலும்பு, தோல், நரம்புக் கூட்டம், கீல்கள், மயிர்க்கால், ஊண்.

வாதத்தின் பிரிவுகள்

1. பிராணன் (உயிர்க்கால்)

மூச்சு வாங்குதல், விடுதல் செய்யும். புசிக்கும் உணவுகளைச் செரிக்கப்பண்ணுதல்.

2. அபானன் (கீழ்நோக்குங்கால்)

கீழ்நோக்கி மலசலத்தைத் தள்ளும், ஆசன வாயைச் சுருக்கும், அன்ன சாரத்தைச் சேர வேண்டிய இடங்களில் சேர்ப்பிக்கும்.

3. வியானன் (பரவுகால்)

உடலிலுள்ள அசையும், அசையாப் பொருள் என்னும் இரண்டிலுமிருந்து உறுப்புகளை நீட்டவும், மடக்கவும் செய்யும்.

4. உதானன் (மேல்நோக்குங்கால்)

உணவின் சாரத்தோடு கூடியிருந்து அதை அங்கங்கே நிறுத்தும்.

5. சமானன் (நடுக்கால்)

மற்ற வாயுக்களை மிஞ்ச வொட்டாமல் மடக்கிச் சரிப்படுத்திச் சேரப்பண்ணும்.

6. நாகன்

எல்லாக் கலைகளையும் கற்கும்படி அறிவை எழுப்பும். கண்களை இமைக்கும் படி செய்யும்.

7. கூர்மன்

கொட்டாவி விடப்பண்ணும், உலகப் பொருள்கள் யாவற்றையும் கண்களுக்குக் காண்பிக்கும்.

8. கிருகரன்

நாவிற்கசிவையும், நாசியிற் கசிவையும் உண்டாக்கும். தும்மலையும் இருமலையும் உண்டாக்கும்.

9. தேவதத்தன்

சோம்பலையும் உடல்முரித்தலையும் உண்டாக்கும், மிக்க கோபம் உண்டாக்கும்.

10. தனஞ்செயன்

காதில் கடல் போலிரைதல், இறந்துவிடின் காற்றெல்லாம் வெளிப்பட்ட பின்னர் மூன்றாவது நாளில் தலைவெடித்த பின்தான் போகும்.

வளிஅழல்கீல்வாயுவில் அபானன், வியானன், சமானன், தேவதத்தன் ஆகியவை பாதிப்படைந்துள்ளது.

அபானன் - மலக்கட்டு.

வியானன் - பாதிக்கப்பட்ட மூட்டுகளில் வலி, நீட்டிமடக்க சிரமம்.

சமானன் - பசியின்மை, செரியாமை.

தேவதத்தன் - அயர்ச்சி, தூக்கமின்மை.

பித்தத்தின் வகைகள்

1. அனற்பித்தம்

உண்ட உணவுப் பொட்களைச் செரிக்கும்படிச் செய்யும்.

2. இரஞ்சகப் பித்தம்

உணவிலிருந்து பிரிந்துண்டான சாற்றுக்குச் செந்நிறத்தைத் தரும்.

3. சாதகப் பித்தம்

விருப்பமான தொழிலைச் செய்து முடிக்கும்.

4. பிராசகம்

தோலுக்கு ஒளியைக் கொடுக்கும்.

5. ஆலோசகம்

கண்களுக்குப் பொருள்களைத் தெரிவிக்கும்.

வளிஅழல் கீழ்வாயுவில் அனற்பித்தம், இரஞ்சகப்பித்தம், சாதகப்பித்தம், பாதிப்படைந்துள்ளது.

அனற்பித்தம் - பசியின்மை.

சாதகப் பித்தம் - அன்றாடப் பணிகளை செய்ய இயலாமை.

இரஞ்சகப்பித்தம் - உடல் வெளுத்துக் காணல்.

கபத்தின் வகைகள்

1. அவலம்பகம்

நான்கு ஐயங்கட்கும் பற்றுக் கோடாயிருக்கும்.

2. கிலேதகம்

உண்ணப்பட்ட உணவுப் பொருள், நீர் முதலியவைகளை ஈரப்படுத்தி மெத்தெனச் செய்யும்.

3. போதகம்

உண்ணுகிற சுவைகளை அறிவிக்கும்.

4. தற்பகம்

கண்களுக்குக் குளிர்ச்சியைத் தரும்.

5. சந்திகம்

மூட்டுகளில் நின்று இயற்கையாய் எல்லா கீல்களையும் ஒன்றோடொன்று பொருத்தித் தளரச் செய்யும்.

வளிஅழல்கீழ்வாயுவில் கிலேதகம், சந்திகம் பாதிப்படைந்துள்ளது.

கிலேதகம் - பசியின்மை

சந்திகம் - மூட்டுகளில் வலி

IV. ஏழு உடற்கட்டுகள் (உடற் தாதுக்கள்)

உடலுக்கு நிரந்தர வலுவானதும் அடிவேராகவும் உள்ளவை தாதுக்கள் எனப்படும்.

சாரம் : உடலையும், மனத்தையும் ஊக்கமுறச் செய்வது.

செந்நீர் : அறிவு, வன்மை, ஒளி, செருக்கு, ஒலி இவைகளை நிலைக்கச் செய்வது.

ஊண் : உடலின் உருவத்தை அதன் தொழிற்கிணங்க அமைத்தலும் என்பை வளர்த்தலும் செய்வது.

கொழுப்பு : ஒவ்வொரு உறுப்பும் தத்தம் செயலை கடினமின்றி இயக்க அவற்றிக்கு நெய்ப்புப் பசை ஊட்டி உதவிபுரிவது.

எலும்பு : உடலை ஒழுங்குபட நிறுத்தி வைத்தல், உடல் அசைவிற்கு அடிப்படையாயிருத்தல்.

மூளை : என்புக்குள் நிறைந்து அவைகளுக்கு வன்மையும் மென்மையும் தருவது.

வெண்ணீர் : கருத்தோற்றத்திற்கு முதலாய் நிற்பது.

வ. எண்.	உடற்கட்டுகள்	குறை குணம்	மிகு குணம்
1	சாரம்	தோல் சுரசுரப்படைதல், மெய் வருத்தம், இளைப்பு. வாட்டம்	ஐய வளர்ச்சியாலும் உடலிற்காணும் கெட்ட பண்புகள், பசித்தீ குறைதல்
2	செந்நீர்	நரம்புத்தளர்ச்சி, வறட்சி, உடலில் நிறம் குறைதல்	பசியின்மை, மிகச் சிவந்தகண், இரத்தபித்தம், காமாலை கட்டிகள்
3	ஊண்	ஐம்பொறி கட்குச் சோர்வு கீல்களில் நோயுண்டாதல்	கண்டமாலை, கிரந்தி உண்டாதல் கன்னம், வயிறு, தொடை, ஆண்குறி இவ்விடங்களில் கழுத்தில் ஊண் அதிகரித்தல்.

4	கொழுப்பு	இடப்பாட்டீரல் வளர்ச்சியும் உடலிளைத்தல்	ஊண் மிகுதியால் ஏற்படும் பிணிகள், களைப்பு அற்ப உழைப்பிலும் பெருமூச்சு.
5	என்பு	என்பு, சந்துகளில் நோவு, பற்கள் கழலல், நகம், மயிர் வெடித்தல், உதிர்தல்	என்புகளும் பற்களும் மிகுதிப்படும்.
6	மூளை	என்புகளில் தொளை விழுதல் திகைத்தல், கண்களில் இருள் கம்மல்	உடல் பாரித்தல்,கண் கனத்தல், சிறுநீர் குறைந்து போதல், அரிதில் தீரும் புண்.
7	வெண்ணீர்	விதையில் குத்தலுடன் வலி	பெண்களிடத்தில் காதல் மிகுதல், கல்லடைப்பு.

வளி அழல்கீல்வாயுவில் சாரம், செந்நீர், ஊண், கொழுப்பு, என்பு, மூளை பாதிப்படைந்துள்ளது.

பருவ காலங்கள்

வாத, பித்த கபங்கள் எந்த காலங்களில் கூடுதல், குறைதல், சமனம் என்ற மூன்று நிலைகளை அடைகின்றனவோ அந்தக் காலங்கள் சூரியன், மேஷம் முதலிய பன்னிரெண்டு ராசிகளில் சேருவதால் ஆறு பருவகாலங்களாக வகுக்கப்பட்டுள்ளன.

முக்குற்றங்கள்	தொடக்கம்	அதிகரித்தல்	சுமம்
வாதம்	இளவேனில் காலம் (சித்திரை,வைகாசி,)	முதுவேனில் காலம் (ஆனி, ஆடி,)	கூதிர் காலம் (ஐப்பசி,கார்த்திகை)
பித்தம்	கார்காலம் (ஆவணி, புரட்டாசி)	கூதிர் காலம் (ஐப்பசி,கார்த்திகை)	பின்பணி காலம் (மாசி, பங்குனி)
கபம்	முன்பனி காலம் (மார்கழி, தை)	பின்பனி காலம் (மாசி, பங்குனி)	முதுவேனில் காலம் (ஆனி, ஆடி)

வளிஅழல்கீல்வாயுவானது கூதிர் (ஐப்பசி,கார்த்திகை) காலத்தில் அதிகளவு காணப்படுகிறது.

VI. திணை

குறிஞ்சி - மலையும் மலை சார்ந்த இடமும்

முல்லை - காடும் காடு சார்ந்த இடமும்

மருதம் - வயலும் வயல் சார்ந்த இடமும்

நெய்தல் - கடலும் கடல் சார்ந்த இடமும்

பாலை - மணலும் மணல் சார்ந்த இடமும்

வளிஅழல்கீல்வாயு மருத நிலத்தில் அதிகளவில் காணப்படுகிறது.

VII. உடல் வன்மை

1. இயற்கை வன்மை

இது சத்துவ, ரஜோ, தமோ குணங்களிலினின்றும் இயற்கையாகவே உண்டாவதாம்.

2. கால வன்மை

இது வயதாலும், இளவேனில் முதலிய பெரும் பொழுதாலும் உண்டாவதாம்.

3. செயற்கை வன்மை

உடலை அதன் குணத் தன்மைக்கு உரிய உணவாதி, செயல்களாலும், உடற்கட்டுகளின் வன்மை கெடாவண்ணம் நிலை நிறுத்தக்கூடிய மருந்துகளாலும் காத்துக் கொள்வதால் உண்டாவதாம்.

வளிஅழல்கீல்வாயுவில் இயற்கை வன்மையும், செயற்கை வன்மையும் பாதிப்படைந்துள்ளது.

பரிகாரம்

பரிகார முறைகள்

I. தன்னிலை திரிந்த வாத குற்றத்தைத் தன்னிலைப்படுத்த கழிச்சல் மருந்துகளைத் தர வேண்டும்

”பேதியால் வாதந்தாழும்”

15 மிலி வெள்ளை எண்ணெய் காலை மட்டும் வெறும் வயிற்றில் பிணியாளிகட்கு கொடுக்கப்பட்டது.

II. மருத்துவம்

- ❖ முடக்குவாதச் சூரணம் 650 மி.கி - 1300 மி.கி தேன் அல்லது தண்ணீரில் கலந்து மூன்று வேளை சாப்பிடவேண்டும்.
- ❖ வாதத் தைலம் வெளிப்பிரயோமாகத் தடவவேண்டும்.
- ❖ தொக்கணம்.
- ❖ ஒற்றடம்.

III. பத்தியம்

1. இச்சாபத்தியத்தில் நீக்கும் பொருள்கள்

"கடுகு நற்றிலைத்தெண்ணெய் கூழ்ப் பாண்டங்கள் கடலை
வடுவதாகிய தெங்குமா வருக்கை நற்காயம்
மடிவிலாத வெள்ளுள்ளி கோள் புகையிலை மதுபெண்
இடது பாகலோடகத்தி நீக்கி விச்சா பத்தியமே"

-சித்த மருத்துவாங்கச் சுருக்கம்

மேலும் சுரை, பூசணி, வெள்ளரி, புடலை, பீர்க்கு முதலிய நீர் கூடிய காய்கறி வகைகளையும் மொச்சை, காராமணி, கொள்ளு, தேங்காய், கிழங்கு வகைகள், மந்தமுள்ள பதார்த்த வகைகள் முதலியவைகள் நீக்க வேண்டும்.

"புளிதுவர் விஞ்சுங்கறி யாற்பூரிக் கும்வாதம்"

புளிப்பு, துவர்ப்புப் பொருட்களை நீக்க வேண்டும்.

2. இச்சா பத்தியத்தில் ஆகும் பொருட்கள்

" பருவரால் கருங்குறவை தேள்மீனி னைப்பருகல்
உரியவுள்ளல் காட்டுப்புறா கபிஞ்சலங் கலைமான்
பெரியவெள்ளை யின்றசை பசும்பானெய் மோரீதலாம்
அரியசம்பீரப் பழத்தின் சாறருந்து தலாமே"

பருத்தவரால், கருங்குறவை, தேளி ஆகிய மீன்களும், உள்ளான், காட்டுப்புறா, காடை, கலைமான், வெள்ளாடு இவைகளின் இறைச்சிகளும், பசும்பால், நெய், மோர், எலுமிச்சப்பழம் ஆகிய இவைகளும் இச்சாபத்தியத்தில் ஆகும் பொருட்களாம்.

நோய் கணிப்பு விவாதம்

வளிக்கீல் வாயு

"வலிக்குத்தல் வீக்கங் காணும் வாய்தொண்டை வறட்சி காய்ச்சல்
தலைவலி மார்து டிப்புத் தாங்கொணா வலிவீக் கந்தான்
நிலவுகாற் ணணுக்கு றங்கு நீடுதோள் முழங்கைக் காற்காம்
மலக்குடற் கட்டு வேர்வை வாதத்தில் வாய்வி தாமே"

- சபாபதி கையேடு

தொண்டையில் வலி, மார்பு நோய், கீல்கள் சிவந்து வீங்குதல். குத்தல் குடைதல், நீட்டவும், மடக்கவும், அசைக்கவும் முடியாமை. சுரமும், வீங்கிய வீக்கத்திற்கேற்ப மிகுதல். வீக்கங்கள், பெரும்பான்மையும் பெரிய மூட்டுகளாகிய முழங்கால், கணுக்கால், இடுப்புச்சந்து, மணிக்கட்டு, முழங்கை, கைச்சட்டை முதலிய கீல்களிலேயே உண்டாகும். எருவும் சிறுநீரும் கட்டும்.

அழல்கீல் வாயு

"பித்தக்கீல் வாய்வு தன்னாற் பிறங்குகீல் முட்டு வீங்கிச்
சித்தர்செய் மருந்து வத்துஞ் சீர்படாத் தன்மைத் தாகித்
தத்தறு காய்ச்சல் கண்டு சாலவே தனைதான் தந்தே
மெத்தறு சிகிச்சை தன்னால் மென்மெல நீங்கு மப்பா."

-சபாபதி கையேடு

மூட்டுகளில் உண்டாகும் வீக்கம் நாளுக்குநாள் பெருத்துக் கொண்டே வந்து, மிகுந்த தீக்குற்றத்தால் கீல்களினிடையேயுள்ள பசை வரண்டு, பசையற்றுக் கீல் அசையும் போதேல்லாம் "கலுக்" "கலுக்" கென்ற ஓர் ஒலி உண்டாவதுமாய் இருக்கும். கீலுக்குக் கீல் கூடி ஒட்டிக்கொண்டு, ஒருகழிபோல மடக்க முடியாமலே நின்றுவிடுவதும் உண்டு.

ஐயக்கீல்வாயு

"கருதருங் கபக்கீல் வாயு கண்டிடின் உடலி ளைக்கும்
உருமெலி வாக்குங் கொள்ளும் உண்டியைச் சுருக்கும் இன்பந்
தருதுயில் நீங்கு முட்டிற் றாங்கொணா வலுவை யாக்கும்
இருமலே விக்கல் வாந்தி சோபைபாண் டெழுப்பும் பாரே"

-சபாபதி கையேடு

இந்நோயில் மாலைப்பொழுதாகிய ஐயவேளையில் உடல் குளிர்ந்து, சுரம் உண்டாய், உடலை நாளுக்கு நாள் இளைக்கச் செய்து, கீல் வீங்கி அவ்வீக்கம் எளிதில் தீராமல், உள்ளுக்குள்ளே புண்பட்டு, சீழ் சேர்ந்து எலும்பைத் துளைத்துக் கொண்டே அழுகச் செய்யும். மற்ற கீல் வாயுக்களைப் போலவே நீட்டவும் மடக்கவும் முடியாமை, குத்தல், குடைதல், நோதல், இடைவிடாச் சுரம், இருமல் இரைப்பு, விக்கல், வாந்தி, குருதியற்று உடல் வெளுத்தல் என்னுங்குறி குணங்களையும் காட்டும்.

வளி ஐய கீல் வாயு

"ஐயினை விலைக்கு முண்டி யயிறலே கூதிர்க் காற்று
மெய்யினை யலைக்கு மாங்கண் மேவலோடு டோதஞ் சார்ந்த
வையத்தின் உறங்கன் மாரி பனியினான் வாட்ட மெய்தல்
மெய்யயர் வுறவு ழைத்தல் கவலையான் மேவு மிந்நோய்"

வீங்கிய மூட்டில் தாங்க முடியாத வலி, குத்தல், குடைதல் உண்டாவதோடு, கை கால்களை நீட்டவும், மடக்கவும் ஒட்டாமை, தூக்கமின்மை நாளுக்கு நாள் உடல் இளைத்தல், அக்குள், தொடையிடுக்கு இவைகளில் கழலைபோல நெரி கட்டிக் கொள்வதுமாகவிருந்து, வீக்கங்கண்ட கையோ, காலோ சூம்பி மெலிவடைந்து செயலற்றுப் போகும்.

5. அழல்வளிக்கீல் வாயு

"வெயிலிடைத் திரிதல் பித்த மிகுமுண வருந்த லுள்ளம்
பயிலுறு கவலை யாதிப் பண்பினால் பித்த வாதம்
கயிலுறு வாய்வு தோன்றிக் கைப்புடன் மயக்கம் வாந்தி
இயலுறு பல்லிற் செந்நீர் இறங்கநால் நோக்குங் கொள்ளும்"

- சபாபதி கையேடு

வாய் கைப்பு, புளிஏப்பம், மயக்கம், குருதி வாந்தி, ஈறுகளினின்று குருதி வடிதல் அல்லது குருதிக்கழிச்சல், கணுக்கால் வீங்கும், வீங்கிய கணுக்கால் சிவந்து மடக்கவும், நீட்டவும் முடியாமல், மிகுதியும் வலித்தல் குத்தல் நோதலுமாய் இருக்கும்.

குற்ற வேறுபாடுகள்

"வளிமிகு வபான வியான வாயுக்க ளதிக ரிக்கும்
இளமிக மலநீர்க் கட்டும் இயம்பிய வபானன் செய்யும்
விளிநிலா வியானன் கீலின் விளங்குறு புழைக டோறும்
ஒளியுறு குற்ற மெல்லா மொன்றிலென் றுலவச் செய்யும்"

- சபாபதி கையேடு

தன்செயல், புறச்செயல், நிலத்தில் எழும் தட்பவெப்பங்கள் ஆகியவற்றால் வளிக்குற்ற மிகுந்து, ஐயத்தைத் தனக்குத் துணை கொண்டு வளியின் தொழில் செய்யும், கால்களாகிய ஐந்தில் (அபான முதலிய ஐந்து வாயுக்களில்) பரவுகால் (வியானவாயு) கீழ் நோக்குக்காலை (அபான வாயுவை)த் தூண்டச் செய்து முதலில் மிகுந்த குற்றங்களாகிய வளியும் ஐயமும் கூடி, கீல்களில் வலி முதலியனவற்றை உண்டாக்கி வீங்கி, நீர் கோர்த்தலையும் அசைய ஒட்டாமையையும் செய்தல் பரவுகாலின் தொழிலாம். ஓரிடத்திலுள்ள வீக்கத்தை மற்றோரிடத்திற்கு மாற்றுதலும் கீழ்நோக்குக்காலின் செயலாம். மலமும், சிறு நீரும் கட்டும்.

கேடடைந்த குற்றத்தின் அளவாய் உடற்கட்டுகளில் (சப்த தாதுக்களில்), முதலில் இரசமும் குருதியும் கேடடையும். ஆதலால் பசியின்மை, உடல் வெளுத்தல், உடல் ஊதல் என்னும் நோய்களையும் தொடரச் செய்யும். நோய் நீண்ட நாள் நிலைக்குமாயின் மற்றைய உடற்கட்டுகளை முறையே கேடடையச் செய்து உடல் வன்மையைக் கெடுக்கும்.

MODERN ASPECTS

Rheumatoid Arthritis

The word Rheumatoid is derived from Greek language (Rheuma : Flux, eidos – resemblance) indicating a condition resembling rheumatism.

'Le rheumatisme' the French term refers to musculo skeletal pains and the term gave us rheumatoid arthiritis a systemic illness with joint involvement.

Sir Alfred Barring Garrod first proposed the term Rheumatoid Arthiritis in 1858.

The potential of the synovial inflammation to cause cartilage destruction and bone erosion and subsequent changes in joint integrity is the hall mark of the disease.

A synovial joint has the following components

- A joint capsule has that isolates the joint from surrounding tissue.
- A joint cavity formed by the surrounding joint capsule.
- A synovial membrane (Synovium) the inner lining of the joint capsule.
- Synovial fluid that is secreted by the synovium and serves as a lubricant and carries nutrients for the joint
- Bones that come together to form the joint.
- Hyaline (articular) cartilage protecting the ends of the bones that participate in the joint.

There may be other structures present in or near the joint such as discs, cartilage (menisci), tendons and ligaments.

Important characteristics of these structures include:

- The joint capsule is composed of two layers, an outer fibrous layer and the inner synovium. The outer layer has many joint receptors innervating it, but is not well vascularised. The opposite is true with synovium i.e. it is well vascularised but poorly innervated.
- The articular cartilage has two important functions including the ability to minimize friction and wear between two opposing joint surfaces during movement and to dissipate forces on the joint over a wider area, thus decreasing stresses on the contacting joint surfaces.
- Synovial fluid contains hyaluronate (hyaluronic acid) and a glycoprotein called lubricin. Both are responsible for the lubrication of the joint, although they are specific for certain components. Hyaluronic acid is important for the cartilage on cartilage lubrication.
- Synovial fluid is also the medium by which nutrients are carried to, and wastes are carried from the vascular components of the joint.
- The ends of the long bones that form the joints are composed of soft, spongy type of bone called subchondral bone. Hyaline (articular) cartilage covers this bone and protects it. Except for the very ends of the bone, long bones are usually very strong.

Definition

The typical clinical phenotype of rheumatoid arthirits is a symmetrical, deforming, small and large joint polyarthritis often associated with systemic disturbance and extra – articular disease features.

Epidemiology

- The prevelance of Rheumatiod Arthiritis is approximately 0.8% of the population.
- Women are affected approximately three times more often than men.
- The prevalence increases with age and sex differences diminishes in the older age group.
- Rheumatoid Arthritis is seen throughout the world and affects all races. The prevalence is lowest in black Africans and Chinese and highest in pima Indians.
- The onset is most frequent during the fourth and fifith decades of life, with 80% of all patients, developing the disease in between the age of 35 and 50.
- Rheumatoid Arthirits is uncommon is men under the age of 45.
- The incidence of Rheumatoid Arthiritis is more than six times great in 60 to 64 year old woman compared to 18 to 29 year old woman.

Aetiology

No single factor had been identified to data.

1. Host genetic factor
2. Immuno regulatory abnormalities and auto immunity
3. A triggering (or) persisting microbial infection

Genetic Factor

- Evidence for the importance of genetic susceptibility comes from higher concordance rates in monozygotic (12-15%) than in dizygotic twins (3%)
- Severe Rheumatoid Arthritis is found at approximately 4 times the expected rate in first degree relatives of

individuals with disease associated with the presence of the auto antibody, Rheumatoid factor.

- ❖ One of the major genetic factors in the aetiology of Rheumatoid Arthiritis is the class II major histocompatibility complex (MHC) gene product HLA –DR4.
- ❖ HLA-DR4 is the major susceptibility halotype in most ethnic groups, DR_1 is more important in Indian and Israelis and DW_{15} in Japanese.
- ❖ Genetic factor influence both susceptibility and severity with DR_4 positivity more common in those with severe erosive disease.

Environmental Factors

Infectious Agent

- ❖ It has been suggested that Rheumatoid Arthritis might be a manifestation of the response to an infectious agent in a genetically susceptible host.
- ❖ The organisms that have been implicated are Epstein – Barr virus, cytomegalo virus, parvo virus, rubella virus and mycoplasma.
- ❖ The microorganism or response to microorganisms might induce an immune response to components of the joints by altering it's integrity and revealing antigenic peptides.
- ❖ Another possibility is that the infecting micro organism might prime the host to cross – reactive determinants expressed with in the joint as a result of "molecular mimicry".
- ❖ Super antigens are proteins with the capacity bind to HLA – DR molecules and patients V_β gene products and stimulate specific T-cell expressing the V_β gene products. "Super antigens" produced by a number microorganisms including Staphylococci, Streptococci and M.arthritidis. The sole of

superantigens in the etiology of Rheumatoid Arthritis remains speculative.

- ❖ Recently scientist have reported that smoking tobacco increases the risk of developing rheumatoid arthritis.

Trauma

Many patients have mentioned traumatic incidents as a precipitating cause.

Psychological Stress

The study of identical twins in one of whom rheumatoid arthritis developed tends to support this concept.

Vascular Changes

Alteration of the normal, peripheral vascular bed perhaps by autonomic influence has been suggested as the primary abnormality.

Neurogenic

Neuropeptides can cause inflammation. Reflex sympathetic areas through the spinal cord could account for the contralateral distribution. Rheumatoid Arthritis affects the non – paralysed side much more severely in a hemiplegic patient.

Autoimmunity

Antigens

The antigens are the substance, which induce specific immune reactions in the body.

Types

1. Auto antigens - the antigens present on the body's own cells like 'A' antigen and 'B' antigen on the RBC's.
2. Foreign antigens - the antigens entering the body from outside.

Antibodies

Antibodies or immunoglobulins (Ig) are produced by plasma cells in response to the presence of antigens.

Immunoglobulins are circulating antibodies synthesized in B lymphocytes and plasma cells in response to the invasion of foreign compounds.

Classes and Subclasses

There are five major classes of immunoglobulins present in humans. They are IgG, IgA, IgM, IgD and IgE.

The differentiation of the classes is based on their molecular weight, structure, electrophoretic mobility, ultra centrifugal properties and immunological properties.

IgG and IgA are further subdivided into subclasses such as G_1,G_2 and G_3 for IgG and A_1 and A_2 for IgA.

Auto immune disease

Normally the body has the tolerance against the self antigen. However, in some occasions, the tolerance fails or becomes incomplete against the self antigen. This state is called auto immunity.

Types

- Organ Specific
- Organ non specific or multisystemic diseases

Rheumatoid Arthritis was classified as an autoimmune disease, following the discovery of IgM Rheumatoid factor in the blood of the patients.

The Rheumatoid factor – secreting plasma cells have been demonstrated in the Rheumatoid synovium.

Other auto antibodies that occur in the rheumatoid arthritis patients include natural antibodies, anti nuclear antibodies, anti collegen antibodies, anti keratin antibodies and an IgG perinuclear factor. They are considered as associated with the disease process but not directly involved in the pathogenesis.

Another set antibodies identified in Rheumatoid Arthritis patients are directed against antigens present on cartilage such as collagen type II, IX and XI and chondrocyte – specific antigens. The popular hypothesis for induction of autoimmunity is that of "antigenic mimicry".

PATHOPHYSIOLOGY

The Initial Events

The Macrophages or dendritic cells that serve as the antigen presenting cells are the first to be involved in the human immune response. The relevant receptors on the antigen presenting cells are the class II major histocompatibility complex (MHC) molecule.

The macrophages ingest process and presence of the foreign antigen to T-lymphocytes initiate a cellular immune response and stimulate the B-lympocytes into plasma cells that secrete antibodies.

Early stage doesnot produce any symptoms.

Organisation of Inflammation

The immune response becomes organised in the perivascular areas in the synovial membrane, as the increase in the number of T-cells leads to the proliferations and differentation of B-cells.

Macrophage from the synovial tissue secrete cytokines which activate the endothelial cells to proliferate and organize them selves into blood carrying tubes. Also within the synovial fluid of an inflamed rheumatoid joint, there is virtual absence of the

suppressor – inducer T cells and marked increase of the helper T-lymphocytes and presence of of the relevant antigen activate the B lymphocytes in synovial membrane to differentiate into antibody secreting cells. These steps are medicated by interleukin – 2.

The antibodies are immunoglobulins directed against the Fc region of the IgG and have been named as rheumatoid factors. Neutophills are attracted into the joint cavity by complement 5a, leukotriene B_4 and platelet activation factor. More than billion neutophills enter the rheumatoid joint each day. The neutrophills release enormous quantities of proteinases and additional chemo-attractant molecules.

Presence of larger amounts of the proteinases and their respective natural inhibitors, allowing unrestricted enzymatic degradation of articular cartlage, meinsci and ligaments.

Rheumatoid Arthritis becomes symptomatic at this stage.

Hands wrist and knee are the first to be affectd. General fatigue and malaise are caused by cytokines such as interleukin and tumour necrosis factor. Morning stiffness is probably due to incresed fluid in and around the joint proliferated and dialated synovial vessels causes the joint to feel warm, In fair skinned individuals a reddish discolouration of overlying skin may be observed.

The Destruction Phase

The production of proteolytic enzymes and prostaglandins by synovial cells is induced by cytokines [interleukin 1]. Dendritic cell has a high level of collagenase and interleukin 1 production. Besides collagenease, the rheumatoid synovium cells also release stromelysin and both proteinases are capable of destroying almost all matrix protein present in articular cartlage and bone.

Pathogenisis

Intracavitary fibrin clots may initiate pannus formation and the immunopathology of rheumatoid arthritis.

Two critical steps, probably host dependent, may determine the development of rheumatoid arthritis an altered regulation of extravascular haemostasis or an aberrant reactivity of synovial fibroblasts to the adhered fibrin clots.

Pathogenesis of rheumatoid arthritis as a fibrin induced disease

1. Exudation of fibrinogen and clotting factors to the joint space follows joint swelling
2. Haemostasis activation within the cavity leads to fibrin formation
3. Fibrin clots are partially removed by the plasminogen system, but most of them get stuck to the synovial intima.
4. Cells at the fibrin-synovium interface migrate into and around the deposits.
5. Clot components induce multiple activating pathways in synoviocytes by the coupling of specific receptors. These include proliferation, secretion of proteinases and synthesis of proinflammatory mediators.
6. A fibro proliferative tissue appears underneath the front of migrating cells, as a result of remodelling the invaded clots by activated cells. In this area, macrophages and blood vessels are increased owing to the release of growth factors and chemokines.
7. Remodelling induces modifications in the structure of fibrin chains, which become immunogenic.

Epitopes from these transformed autologous peptides are presented to T lymphocytes, which in turn initiate a specific

immune reactivity against them. As illustrated in the right panel, continuous deposition of fibrin clots and the advance of the front of migration account for tissue hypertrophic growth at the areas of attachment.

Clinical Features and Manifestation

The small joints of the hands and feet are first affected in 70% of the patients. In older patients the shoulder joint commonly involved first. The onset is acute with fever and serious constitutional symptoms in about 20% of cases.

Rheumatoid Arthritis [Peri as well as Polyarticular in site]

Pathological Process	**Tissue Involved**	**Results In**	**Deformitis**
Vasculities Necrosis Fibrosis	Joint Structures	Synovitis – effusion Articular cartilage destruction peri capsulitis Ligamentation instability Arthritis	Swelling Stiffness Instability subluxation – dislocation intrinsic plus defromity
Plasma cell Proliferation	Tendon	Tenosynovitis Rupture	Ulnar deviation of fingers Concertina collapse of fingers
Granulation	Muslce	Wasting	

tissue and Pannus formation		Atrophy Fibrosis	Contracture Ankylosis
Synovial hypertrophy in joint In tendon	Bone	osteoporosis – thinning of cortex and loss of trabecular structure cyst formation – Subchondral erosions (adjacent to metaphysis Destruction)	
	Subcutaneous	Nodules	

Distinct Patterns of onset

Palindromic Onset

In about one-fifth of the patients with rheumatoid arthritis typically the inflammation develops over few hours and is accompanied by erythema and swelling of the affected joints but resolves completely with in 48 to 72 hours leaving no residual features.

Explosive Onset

In about 10% of cases the onset of the disease is very rapid, even over night, with sever symmetrical polyarticular involvement.

Systemic onset

This is particularly common in middle aged men in whom non-articular features may dominate the clinical picture although rheumatoid factor is usually present in high titres.

Insidious Onset

Rheumatoid Arthritis develop insidiously over weeks or months, it is seen in upto 70% of the cases, associated with a relatively poor prognosis.

Ploymyalgic Onset

Limb / Girdle muscle symptoms may precede the onset of an overt arthropathy, particularly in the elderly.

Mono and Pauci articular onset

In young women there may initially be very limited joint involvement, particularly involving the knees.

Acute (or) Subacute Onset

One third of patients have an acute or sub acute onset.

Signs and Symptoms

Pain in the affected joints, aggravated by movement, is the most common manifestation of established RA.

Generalised stiffness is frequent and is usually greatest after periods of inactivity. Morning stiffness of greater than one hour duration is an almost invariable feature of Inflammatory arthritis and may serve to distinguish it from various non-inflammatory joint disorders.

Constitutional symptoms such as weakness, easy fatiguability, anorexia and weight loss are experienced by majority of the patients.

Although fever to 40°C occurs on occasion. Clinically synovial inflammation causes swelling, tenderness and limitation of motion.

Joint swelling results from accumulation of synovial fluid, hypertrophy of synovium and thickening of the joint capsule.

Initially motion is limited by pain. Later fibrous or bony ankylosis or soft tissue contractures lead to fixed deformities.

Warmth is usually evident on examinaion, especially of large joints such as knee but erythema is infrequent.

INVOLVEMENT OF INDIVIDUAL JOINTS

Hands and wrist

Rheumatoid Arthritis characteristically involving certain specific joints such as proximal interphalengeal joints and the metacarpo phalangeal joints.

Early in the disease there may be soft tissue swelling around the affected joints.

The typical patients show fusiform inflammatory swellings, often with a dusky cyanosis over the inflammatory joints, which produce characteristic **spindle shaped fingers.**

Later marked synovial hypertrophy on the dorsum of the wrist with involvement of extensor tendon sheath results in **dropped finger** affecting the little finger.

Tenosynovitis of the long flexor tendons in the palm of the hand may exacerbate stiffness of the fingers and cause **trigger finger**.

Synovitis at the wrist with in the flexor retinaculum may cause compression of the median nerve with the typical features of the **carpal tunnel syndrome**.

Volar subluxation of the fingers at the metacarpophalangeal joints occurs as a result of destruction of the articular cartilage and subsequent instability of these joints.

Piano key sign

Weakening of the distal radio - ulnar ligament by synovitis allow the distal ulnar to migrate dorsally so that it overrides the radius (**caput ulnae syndrome**). The ulna can be depressed by pressure like a piano key.

Carpal collapse and fusion

It may occur late in the disease, when instability of the wrist may lead to collapse of the carpal bones causing foreshortening of the carpus and ultimately spontaneos fusion of the wrist.

The eventual functional loss characterized by inability to make a fist, pinch thin objects and weakend grip strength.

Persisting synovitis with destruction of the articular surface, weakening of the joint capsule, muscle wasting with or without tendon rupture leads to characteristic rheumatoid hand defromity which includes,

- ❖ Ulnar deviation of the fingers and subluxation of the fingers as a result of instability of these joints.
- ❖ Swan neck deformity with hyper extension of the proximal interphalangeal joints with fixed flexion of the distal interphalangeal joints.
- ❖ Button hole deformity (Boutonneir's deformity) which includes fixed flexion of the proximal interphalangeal joints and extension of the distal inter phalangeal joints.
- ❖ "Z" deformity of the thumb – radial deviation of the wrist, ulnar deviation of the digits after with palmar subluxation of the proximal interphalangeal joints.
- ❖ Bull horn deformity – due to rupture of the extensor communis tendon from synovitis near the ulnar styloid.

Elbow and Shoulder Joints

- ❖ Involvement of the elbow is less common than of the wrist, but severe destructive changes leads to "fixed flexion deformity".

- ❖ Radiohumeral joint is more commonly symptomatic than humeroulnar joint.
- ❖ Periarticular structures(Olecranon bursa, Ulnar nerve) also be affected by synovitis and subcutaneous nodules are commonly found on the extensor surface of the fore arm close to the elbow.
- ❖ There may be inflammation of the subacromial bursae or supraspinatus tendon in addition to glenohumeral joint synovitis, producing a typical **painful arc syndrome.**

Feet and Ankle Joints

- ❖ Active synovitis in the metatarso phalangeal joint can produce pain and tenderness, best elicited by the lateral squeezing of the joints.
- ❖ The synovial swelling of the active disease together with constriction of the ligament between the metatarsal heads may broaden the forefoot and separate the foot to produce the **Day light Sign**.
- ❖ Typical deformities may also developed in the feet including
    - Eversion at the hind foot (Subtalar joint)
    - Plantar subluxation of the metatarsal heads
    - Widening of the fore foot

      Hallux valgus and lateral deviation and dorsal subluxation at the toes. Patient complaints of pain arising in the ball of the foot (Metatarsalgia) which can vary in intensity from a feeling of **"walking on Pebbles to like walking on broken glass"**.

      Chronic Arthritis in the subtaloid and midtarsal region can lead to **"Pes plano – valgus deformity".**

Knee Joints

- In the knee joint synovial hypertrophy and effusion are often marked.
- Pain and swelling in the back of the knee joint may be caused by extension of inflammed synovium into the popliteal space **(Baker's cyst)**.
- Wasting of quadriceps is present. flexion contraction may develop.

Axial skeletal

- Spinal arthritis is common, upto 80% of patients demonstrating radiological evidence of the disease in the cervical spine.
- The patients complaints pain in the cervical spine that radiates upwards over the occiput, vertex and to the fore head.
- Instability (lateral or vertical subluxation) of the atlantoaxial joint reuslts them erosion of the odontoid peg or rupture of the supporting ligaments and will be apparent on lateral radiographs of the cervical spine.
- Atlanto axial dislocation may cause vertebro basillar insufficency or may produce neurological signs by direct pressure on the cord.
- Involvement of sacroiliiac joint is rare in Rheumatoid Arthritis.

Hip Joints

- The Hip is less commonly involved.
- Pain is usually experienced in the groin and the buttock, but may radiate to the knee sometimes mimicking knee arthritis.

- ❖ Persistent synovitis in the weight bearing joint soon leads to the destruction of the cartilage and bone. The acetabulum is eroded and eventually the femoral head may get perforated as its floor.
- ❖ The hall mark of the disease is progressive bone destruction on both sides of the joints without any reactive osteophyte formation. This is often referred to as "aseptic necrosis".

Other Joints

- ❖ Hoarseness of voice caused by effusion with in the cryco – arytenoid joints.
- ❖ Temporal – mandibular joint involvements produces pain on chewing.
- ❖ Acromioclavicular and sternoclavicular joints may also be involved.
- ❖ Discitis can occur in the lumbar as well as the cervical spine.

EXTRA ARTRICULAR MANIFESTATION

Systemic	
1. Fever	2. fatigue
3. Weight loss	4. susceptibility to infection
Musculo skeletal	
1. Muscle-wasting	2. bursitis
3. Tenosynovitis	4. osteoporosis
Haematological	
1. Anaemia	2. eosinophilia
3. Thrombocytosis	
Lymphatic	
1. Splenomegaly	2. felty's syndrome

Nodules	
1. Sinuses	2. Fistulae
Ocular	
1. Scleritis	2. episcleritis
3. Scleromalacia	4. keratoconjuctivitis sicca
Vasculitis	
1. Digital arteritis	2. mono neuritis multiplex
3. Ulcers	4. visceral arteritis
5. Pyoderma gangrenosum	
Cardiac	
1. Pericarditis	2. Myocarditis
3. Endocarditis	4. conduction defects
5. Coronary vasculitis	6. granulomatous aortitis
Pulmonary	
1. Nodules	2. Bronchiolitis
3. Pleural effusions	4. caplan's syndrome
5. Fibrosing alveolitis	
Neurological	
1. Cervical cord compression	2. Peripheral Neuropathy
3. Compression neuropathies	4. mono neuritis multiplex

Low grade fever, weight loss, anorexia amd malaise are some of the extra atricular manifestation.

Besides these it includes,

Subcutaneous Rheumatoid Nodules

Subcutaneous and intracutaneous nodules are the hall mark of the disease.

It develops in 20 to 30% of patients with Rheumatoid Arthritis.

They are usually found on peri articular structures, extensor or other areas subjected to Mechanical pressure.

Common locations include a olecranon bursa, the proximal ulnar, the achilles tendon, the occiput etc., they are also found in the flexor tendon, the sclera, with in the aortic valve, myocardium, larynx and vocal cord.

Histologically, the nodules consist of a central zone of necrotic material, including collagen fibrils, non-collagenous filaments and cellular debris, mid zone of palisading macrophages that express HLA – DR antigens and an outer zone of granuloma tissue.

Rheumatoid Vasculitis

It can affect nearly any organ system and is seen in patients with severe form and high titres of circulating rheumatoid factors.

Neurovascular disease presenting either as distal sensory neuropathy or as mononeuritis multiplex may be the only sign of vasculitis.

Cutaneous vasculitis usually presents as crops of small brown spots in the nail bed, nail folds and digital pulp. Larger ischaemic ulcers especially in the lower extremity may also develop.

Vasculitis also involves the lungs, bowel, liver, spleen, pancreas, lymphnodes and testes.

Renal Involvement

Renal papillary necrosis and interstitial nephritis occassionally occur IgA nephropathy associated with elevated serum levels of IgM and IgA is described in Rheumatoid Arthritis.

Liver Involvement

This is evident in about 10% of patients with active disease.

There may be mild hepatospleenomegaly and asympatamatic elevation of the serum alkaline phosphatase.

Kupffer cell hyperplasia and lymphocytic infilteration of the portal tracts may be seen.

Pulmonary Manifestations

- This is more in men.
- Pleuro pulmonary nodule may occur as singly or in clusters when they appear in individuals with the pneumoconiosis and diffuse nodular fibrotic nodules 0.5 – 5 cm in diameter are seen mainly in the periphery of the lung fields. This association is known as **Caplan's syndrome**. These nodules may produce pneumothorax or broncho pleural fistula.
- Interstitial fibrosis
- Pleurisy and pleural effusion produces frank synovitis.
- Pulmonary fibrosis is common in rheumatoid arthritis but is often subclinical.
- Pulmonary hypertension due to vasculitis.
- Obliterative bronchiolitis is a rare but rapidly progressive and fatal process.

Cardiovascular Manifestations

- Asymptamatic pericarditis
- Pericardial effusion
- Constrictive pericarditis
- Cardiomyopathy
- Coronary artery occlusion
- Acute aortic regurgitation
- Valvulitis

Hematological Manifestations

- **Felty's syndrome**

This syndrome describes the association between rheumatoid arthritis, spleenomegaly and leucopenia with normochromic normocytic anaemia, thrombocytopenia, lymphadenopathy, cutaneous pigmentation, persistent skin ulceration and weight loss.

- **Thrombocytosis**
- **Eosinophilia**

Neuro Muscular Manifestations

- Peripheral neuropathies - usually sensory or occasionally sensori motor.
- Atlanto axial or mid cervical spine subluxation may produce Vertibro Basilar Insufficiency (VBI) and neurological manifestations due to direct compression of the cord.
- Entrapement neuropathy e.g. Median nerve compression at wrist – **carpal tunnel syndrome**.
- Posterior tibial nerve compression at ankle – **tarsal tunnel syndrome**.
- Ulnar nerve compression at elbow.
- Cervical myelopathy.

Tenosynovitis and Bursitis

- "**Triggering**" of the fingers may be associated with nodules in the flexor tendon sheaths which can progress to permanent flexion contractures or tendon rupture if left untreated.

Muscular Changes

- Muscle atrophy in Rheumatoid patients is usually attributed to reflex inhibition and disuse because of articular inflammation.

Ocular manifestations

- Episcleritis which is mild and transient.

- ❖ Scleritis which involves the deeper coat of the eye and is a more serious inflammatory condition.
- ❖ Keratolysis (corneal melting)
- ❖ Sclero malacia
- ❖ Sclero malacia perforans
- ❖ Sjogren's syndrome – Keratoconjunctivitis sicca, Xerostomia and Rheumatoid Arthritis or other connective tissue disorder with the lack of tear and salivary secretions.
- ❖ The symptoms are gritty sensations in the eyes, dryness of the mouth, photophobia, dysphasia, recurrent otitis media, chronic respiratory disease and dryness of the skin.

The following are less common:

Osteoporosis

- ❖ Spontaneous fractures occuring in the long bones, neck of the femur and pelvis are well recognised in patients with Rheumatoid arthritis.
- ❖ A small proportion of patients may develop Oteomalacia.

Lymphnode enlargement

- ❖ Chronic positive RA or the neutropenic patient with felty's syndrome is particularly susceptible to infection.
- ❖ It has been estimated that death from infections occurs at 8 to 10 times more the rate for the normal population.

Peripheral Oedema

- ❖ Recurrent oedema of the lower limb is commonly found.
- ❖ In some cases it develops around the acutely inflammed ankle joint.

Diagnosis

The diagnosis will be based on the pattern of symptoms, the distribution of the inflamed joints, and the blood and X-ray findings.

- In rheumatoid arthritis, the small joints of the hands, wrists, feet and knees are typically inflammed in a symmetrical distribution (affecting both sides of the body). When only one or two joints are perform other test to exclude arthritis becomes more difficult.
- Rheumatoid factor can be found in 80% of patients.
- A test for citrulline antibodies is most helpful in looking for the cause of previously undiagnosed inflammatory arthritis.
- The antinuclear antibody (ANA) is also frequently found in patients with rheumatoid arthritis.
- The ESR is used as a crude measure of the inflammation of the joints. The sedimentation rate is usually faster during disease flares, and slower during remissions.
- Another blood test that is used to measure the degree of inflammation present in the body is the C-reactive protein.
- Joint x-rays may be normal or only show swelling of soft tissues early in the disease.
- As the disease progresses x-rays can show bony erosions typical of rheumatoid arthritis in the joints. Joint x-rays can also be helpful in monitoring the progression of disease and joint damage over time. Bone scanning, a radioactive test procedure, can demonstrate the inflamed joints.
- Analysis of the joint fluid, in the laboratory, can help to exclude other causes of arthritis, such as infection and gout.

The revised criteria of 1987 (American college of Rheumatology)

	Criteria	**Comments**
1.	Morning stiffness	Duration > 1 hr lasting > 6 weeks
2.	Arthritis of atleast 3 areas	Soft tissue swelling or exudation lasting > 6 weeks

3.	Arthritis of hand joints	wrists, meta carpophalangeal joints or proximal interphalangeal joints lasting > 6 weeks
4.	Symmetric Arthritis	At least one area, lasting > 6 week
5.	Rheumatoid nodules	As observed by the physician
6.	Serum rheumatoid factor	As assessed by a method positive in less than 5 percent of control subjects
7.	Radiographic changes	As seen on anteroposterior films of wrists and hands

Rheumatoid Arthritis is diagnose if 4 of the 7 criteria are met.

Investigation

No test are specific for diagnosing Rheumatoid Arthritis.

A .Haematological

- Normochromic normocytic anemia is frequently present in active Rheumatoid Arthritis.
- The WBC count is usually normal, but a mild leucocytosis may be present.
- Eosinophilia when present usually reflects severe systemic disease.
- The Erythrocyte Sedimentation Rate is increased in nearly all patients with active Rheumatoid Arthritis.
- The levels of acute phase reactants including ceruloplasmin and C-reactive protein are also elevated.

IMMUNOLOGICAL

1 .Rheumatoid Factor

Auto antibodies other than Rheumatoid Factor in Rheumatoid Arthritis.

- Antiperinuclear factor
- Antikeratin antibodies
- Antibodies to cyclic citrullinated peptide (CCP)
- Antibodies to Sa, p68 and calpastatin.

Of these anti-CCP antibodies stand out as the most useful clinically, especially in defining Rheumatoid Arthritis in early.

Synovial Fluid Analysis

Confirms the presence of inflammatory arthritis, although none of the finding is specific.

Synovial Fluid findings in Rheumatoid Arthritis

Synovial Characteristics	Rheumatoid Arthritis
Colour	Yellow
Clarity	Cloudy
Viscosity	Poor
Mucin clot	Poor
White blood cell count / mm^3	3000- 50,000
% Polymorpho nuclear leukocytes	>70
Glucose Levels	10 - 25 % less than serum
Total protein	>30 grams / dl
Complement	Low
Microscopic features	RA cells
Culture	Negative

Synovial Biopsy

Villus formation with thickening of synovial layer and infiltration with abnormal cells,

Radiographic evaluation

- Soft tissue changes around a joint due to an effusion
- Periosteal reaction with new bone formation along the shaft adjacent to where the capsule is attached
- Peri-articular osteoporosis
- Narrowing of joint spaces
- Subchondral erosions
- Subluxation and ankylosis
- Subchondral cyst formation

Arthroscopy

In acute rheumatoid arthritis, synovium is oedematous, diffusely erythematous and friable. In more chronic conditions it becomes thickened.

Renal Biopsy

Indicated in cases of reduced tubular or glomerular function.

Pulmonary Biopsy

Used to distinguish Rheumatoid nodules from carcinoma or to establish diagnosis of fibrosing alveolitis.

Scintigraphy

Urine analysis

Biochemical Analysis

CT Scan

MRI

Progonosis

Patients treated by simple methods show that after 10 years 50% will have improved and 50% deteriorated grading of these patients according to their disability.

21% have no disability .

41% have moderate disability

27% have more severe (Independent)

11% are dependent others

A number of features are correlated with a greater likelihood of developing joint abnormalities or disability. These include,

- Presence of more than 20 inflammed joints
- A markedly elevated ESR.
- Radiographic evidence of bone erosions
- The presence of Rheumatoid nodules.
- High titers of serum Rheumatoid factor.
- The presence of functional disability
- Persistent inflammation
- Advanced age at onset
- The presence of comorbid conditions
- Low socio – economic status or educational level
- The presence of HLA – DRBI * 0404.

Remissions of disease activity are most likely to occur during the first year. The median life expectancy of persons with Rheumatoid Arthritis shortened by 3 to 7 years.

Factors which suggest poor prognosis

- Insidious onset
- Unremitting disease
- The presence of nodules

- ❖ Other vasculitic phenomena
- ❖ Severe systemic involvement with a high ESR and anaemia.
- ❖ The presence of Serum Rheumatoid Factor in high titre and HLA DR4.

Treatment

Treatment has five main aims.

1. Relief of pain
2. Reduction of inflammation
3. Minimizing undesirable side effects
4. Preservation of muscle strength and joint function
5. The return as rapidly as possible to a normal life style

A variety of physical therapy modalities may be useful in decreasing the symptoms of Rheumatoid Arthritis.

Rest ameliorates symptoms and can be as important component of the total therapeutic program.

In addition splinting to reduce unwanted motion on inflammed joint may be useful.

Exercise directed at maintaining muscle strength and joint mobility without exacerbating joint inflammation.

Future treatments

- ❖ Treatments that block the action of the special inflammation factors, such as tumour necrosis factor (TNF alpha) and interleukin -1 (IL-1).
- ❖ Studies involving various types of the connective tissue collagen are in progress and show encouraging signs of reducing rheumatoid disease arthritis.
- ❖ Gene profiling, also known as gene array analysis, is being identified as a helpful method of defining which people will response to which medications.
- ❖ Studies are underway that are using gene array analysis

to determine which patients will be at more risk for more aggressive disease.

- Genetic research and engineering is likely to bring forth many new avenues of earlier diagnosis and accurate treatment in the near future.
- Recent antibody research has found that the presence of citrulline antibodies in the blood has been associated with a greater tendency toward more destructive forms of Rheumatiod Arthritis.

We are at the threshold of tremendous improvements on the way Rheumatoid Arthritis is managed.

Juvenile Rheumatoid Arthritis

In 5% of people with Rheumatoid Arthritis the disease develops before the patient is 16 years old. These patients are said to have Juvenile Rheumatoid Arthritis.

In 25 % of children with Juvenile Rheumatoid Arthritis, the disease begins with

- Sudden onset of fever of over 39 °C
- Severe malaise
- A morbilliform rash
- Often generalized lymphadenopathy
- Hepatomegaly
- Spleenomegaly
- Some times a pericardial effusion, pleural effusion, myocarditis or pneumonitis

These symptoms persist for weeks or months before polyarthritis become evident.

This acute form of Juvenile Rheumatoid Arthritis is called 'Still's disease' after the English physician Sir George Still who described it in 1897.

In 30% of children the disease is confined to a few joints most often a knee or ankle.

J.R.A differs from R.A in adults. In that

1. Oligo arthritis is more common
2. Systemic onset is more frequent
3. Larger joints are affected more than smaller joints
4. Rheumatoid nodules and rheumatoid factor are usually absent and
5. Antinuclear antibody seropositivity is common.

Genetic susceptibility, abnormal immuno regulation, cytokine production and viral infection may all play a role in the pathogenesis.

DIFFERENTIAL DIAGNOSIS

1. Ankylosing spondylitis

Ankylosing spondylitis is a chronic, progressive and crippling disease affecting the spine. It is related to certain tissue types of the human leukocytic antigen (HLA) system. The majority of ankylosing spondylitis patient is found to belong HLA – B27 groups.

The disease occurs in the 3rd and 4th decades of life and is more common in males The patients present with complaints of diffuse pain in the back and vague pain in other joints.

2. Reiter's disease

Reiter's disease characterized by triad of polyarthritis, urethritis, conjunctivitis. The joint condition is an acute polyarthritis resembling rheumatoid arthritis, it does not cause destructive changes in the joint structures.

3. Psoriatic arthritis

a. The most common type is the one involving the distal interphalangeal joints of the hands and feet with psoriatic nail. Metacarpophalangeal joints are never involved in psoriatic arthritis.
b. Arthritis multilens is a severe form where there Is marked destruction of joints.
c. Symmetrical polyarthritic type.
d. Oligo arthritic type.
e. Spondyloarthritic type.

Enteropathic Arthritis

Chronic inflammatory bowel diseases like regional enteritis (chron's disease) and ulcerative colitis are associated with Arthritic lesion in about 10% of the cases. The joint condition shows remission and exacerbation along with activity of the underlying bowel disease .

Sjogren's syndrome

Sjogren's syndrome is an immunologic disorder characterized by progressive destruction of the exocrine glands leading to mucosal and conjunctival dryness (Sicca Syndrome) accompanied by a variety of auto immune phenomena.

Clinical Manifestations

Keratoconjunctivitis and Xerostomia.

Renal involvement produces mild interstitial that may result in renal tubular acidosis.

Vasculitis - Cutaneous palpable (or) hypersensitivity vasculitis of the lower extremities

Sensory polyneuropathy and mononeuritis multiplex.

Pulmonary involvement generally takes the from of an interstitial pneumonitis.

COMPLICATIONS

Septic Arthritis

It may complicate Rheumatoid Arthritis, particularly in patients with longstanding nodular sero-positive disease. In debilitated patients, fever and leucocytosis may be absent and the signs of infection limited to malaise and slight exacerbation of inflammation in one or more joints.

Staphylococcus aureus is commonly implicated secondary to invasion from an ulcerated nodule or infected skin lesion.

Amyloidosis

It is a complication of prolonged active disease and is formed in 25% to 35% of patients at autopsy, making Rheumatoid Arthritis a leading cause of secondary amyloidosis.

Fixed Deformities

Early assessment and planning should prevent postural deformities that will result in joint contractures.

Muscle weakness

Even mild degree of Myopathy or neuropathy when combined with prolonged inactivity may lead to profound muscle wasting and weakness.

Joint Rupture

Occasionally the joint lining ruptures and synovial contents spill in to the soft tissue.

Spinal Cord compression

It is a rare complication of cervical spine instability.

Systemic Vasculitis

This is a rare but potentially serious complication.

Management

The current concept regarding the management of rheumatoid arthritis emphasize medical therapy, physical occupational therapy and education to the patients.

Rest

It plays an important part in the acute stage of arthritis in which the inflammed joints are painful even at the slightest movement.

Diet

Maintaining a healthy diet is the best diet however. Eating a diet, which is replete with vegetables, fruit and fish is most likely to be helpful.

Vitamins

Calcium and Vitamin D have been proven to be beneficial in the treatment of osteoporosis.

ADJUNCTIVE TREATMENTS

Rehabilitation

Rheumatoid Arthritis patients require rehabilitative measures that include physical therapy, and special splints and appliances to help them and manage their own self care activities like dressing and diet.

Physical Therapy (Physiotherapy)

Physiotherapy includes

1. Active exercise
2. Passive joint movements
3. Local heat
4. Massage
5. Electrical stimulation of muscles
6. Ultra sound therapy
7. Light therapy, ultraviolet rays and infrared rays

Exercise therapy

Once inflammation is satisfactorily controlled, appropriate and regular exercises is essential to strengthen muscles weakened by disease.

Fore arm

- ❖ Elbows bent, turn palm of the hand and then back of the hand towards face.

Wrist

- ❖ Keeping forearm steady, move the wrist up and down as in waving.
- ❖ Again hold forearm steady, move the wrist up and down as in hand shaking.
- ❖ Make circle with hands.

Hand and fingers

Make tight fist.

- ❖ Open fingers as wide as possible
- ❖ With the hand open spread fingers away from each other and then together.
- ❖ Touch tip of the thumb to the tip of each finger.
- ❖ Bend the thumb in toward palm of the hand.

Lower Extremities

Knee

Sit with your feet off the floor. Lift the leg and then allow it to return to the bent position slowly.

Ankle

- Pull foot up and in, and then push back down.
- Make circle with foot.
- Pull foot in toward other foot.
- Pull foot to outside.

Toes

- Pull up on toes then curl toes under.

Exercises for the Neck

- In the sitting position, twist your head as far as possible in each direction.
- Sit or stand with your hands on the hips. First circle the head clockwise, then anti clockwise.
- In the sitting position, try to touch each shoulder with your head.
- In the sitting position look behind as far as possible and then look at your toes.

Exercise benefits for individuals with Arthritis

- Helps to preserve muscle strength and normal mobility of joints.
- Relieves pain and stiffness.
- Prevents further deformities.
- Improves over-all physical fitness.
- Improves coordination.

Heat and Cold Treatment

Heat and cold treatment are effective means of relaxing muscles and relieving pain in arthritis joints. A hot bath, hot pads, paraffin wax and cold compresses are some methods frequently used.

Massage

A special method of rubbing is called Massage.

Massage is the practice of applying structured or unstructured pressure, tension, motion, vibration — manually or with mechanical aids to the soft tissues of the body, including muscles, connective tissues, tendons ,ligaments, joints, lymphatic vessels, organs of the gastrointestinal system and reproductive system to achieve a beneficial response.

Massage Techniques

- Tapping
- Kneading
- Rubbing
- Squeezing

Tapping

Tapping should be done with open palms and relaxed fingers.

Whereever the body gets tapped circulation increases.

It strengthens the muscles.

Kneading

Kneading creates activity inside the cell walls of the muscles and the circulation of life giving chemicals commences.

This helps growth and development of the body and rejuvenates the body.

Rubbing

There are two different ways in which rubbing is done.

- Dry

- With oil

Rubbing is an excerise for the skin, it excites circulation and increases the heat in the area massaged because of friction.

Squeezing

While squeezing, special pressure should be applied at the pressure points.

Therapeutic Massage

- General weakness
- Rheumatism
- Paralysis
- Insomnia
- Arthritis
- Neurasthenia
- Sciatica
- Muscular atrophy

Uses

- It is excellent for relieving muscle aches, muscle weakness, muscular atrophy and it is a powerful non drug method to promote sleep by using medicated oils.
- Improve the circulation of blood to the affected parts, nervous system and lymphatic system.
- It works on the body both levels of physical and mental.
- It balances the three Dhosams.
- Rubbing of the body produces heat and increases the blood circulation.

Special Medicine

Yogaasanam, Piranayamam and Thiyaanam are the special medicines in the treatment of Vali azhal keel vayuand they are done as a supportive therapy for quick relief.

Yoga

Yogam means mixing up

Stages of Yoga

'Eyamam' stands for good habits.

'Niyamam' denotes good action.

'Aasanam' means seat.

'Piranayamam' is meant for breathing exercise.

'Prathiyakaaram' is the control over the five senses.

'Dharanai' is the act of controlling breathing and mind.

'Diyanam' is to control one-self.

'Samaathi' mixing with Brahmam.

The three main aspects of yoga are -

Asanas or poses

"Asana", means simple postures and a path to unity of spirit.

The practice of asanas promotes:

- Muscle flexibility.
- Tendon strength.
- Massages the internal organs.
- Brings various internal and glandular functions into balance.

Pranayama or breathing

Pranayama can be called the singular most important aspect of yoga as they are means to purify the subtle energies flowing through the body. Yogic breathing techniques are an effective tool to calm, energize, harmonise and tranquilise the body and mind. All poses are to be properly coordinated with inhalation, exhalation and holding of breath.

Meditation

Meditation means the continuous flow of the mind towards "Soul" through the total exclusion of all ideas foreign to it. Concentrated attention of object of thought or awareness.

The English word **meditation** comes from the Latin *meditatio*, which originally indicated every type of physical or intellectual exercise.

Purposes and effects of meditation

Improved concentration, awareness, self-discipline and equanimity through meditation.This is extremely helpful while responding to stressful situations. Meditation can be used for personal development.

BENEFITS

Physical Benefits

Yoga creates a toned, flexible, and strong body in order to improve respiration, energy, and vitality. It helps to maintain a balanced metabolism, promotes cardio and circulatory health and relieve pain. It also helps to look and feel younger while improving the athletic performance.

Mental Benefits

Yoga helps to relax and handle stressful situations more easily. It teaches how to quiet the mind so can focus the energy where we want it to go .Yoga encourages positive thoughts and self-acceptance.

MATERIALS AND METHODS

The disease Vali azhal keel vayu has been dealt in the book Siddha Maruthuvam according to Sabapathy Manuscript; patients were selected according to the symptoms as mentioned in Vali azhal keel Vayu.

Selection of Patients

For these clinical study 20 patients of both sexes and of varying age groups suffering from Vali azhal keel vayuwere selected and admitted in the In-patient ward of post Graduate Department of Sirappu Maruthuvam, Government Siddha Medical College, Palayamkottai.

Evaluation of Clinical Parameters

In this study the detailed clinical history was taken from the patients. Special attention was laid on the pain, swelling and stiffness, regarding their nature, site of occurrence, mode of onset and severity. The seasonal variation and precipitating factors like emotional stress, trauma, and change of climate were enquired. Constitutional symptoms like easy fatiguability, anorexia, loss of weight, pyrexia were noted; extra articular features like conjunctivitis, iritis, episcleritis, vasculitis etc were noted carefully.

Socio economic status, family history and other significant disease was already treated were noted.

Study of Siddha aspect of diagnosis

A case sheet was prepared on the basis of siddha methodology (ie) Envagaithervugal, Uyirthathukkal, Udalkattugal, Poriyal arithal, Pulanal arithal, Vinathal etc. Besides an individual case sheet maintained for each case in the In-Patients ward.

The clinical Investigation

The diagnostic tests such as Blood test for TC, DC, ESR, Hb, Sugar, Urea, Serum Cholesterol, Rheumatoid factor, Urine analysis for sugar, albumin deposits and stools examination for ova, cyst to rule out any systemic illness were done.

Pharmacological evaluation of the trial medicines were conducted at the pharmacology department in Government Siddha Medical College, Palayamkottai.

Bio chemical analysis of the test medicine was conducted at the department of Bio chemistry in Government Siddha Medical College, Palayamkottai.

Management

The treatment is aimed to neutralize the vitiated vatham, Pitham, kabam.

'Viresanathal Vatham Thazhum'

This quotation emphasizes that vitiated vatham can be brought down by means of laxatives (or) purgatives. Since Vali azhal keel Vaya is under vatha disese. Vellai ennai which is one among the laxative in siddha system was selected. All patients were advised to take.

This drug was not repeated for the next day onwards.

The trial medicines used for this study were,

1. Mudakkuvatha Chooranam 1 gm thrice a day with honey or water (Internal)
2. Vatha thylam (External application)

RESULTS AND OBSERVATIONS

For the clinical study 20 in-patients and 20 out-patients cases were selected and treated in Post Graduate Department of Sirappu Maruthuvam, Government Siddha Medical College Hospital, Palayamkottai. Results were observed with respect to the following criteria.

1. Sex distribution
2. Age distribution
3. Kalam
4. Constitution of the Body
5. Gunam
6. Paruvakalam
7. Thinai
8. Socio-economic status
9. Aetiological factors
10. Mode of onset

11. Clinical manifestations
12. Duration of illness
13. Systemic examination
14. Gradation of pain, joint swelling and restricted Movements
15. Duration of morning stiffness
16. Deformities of joints
17. Deep tendon reflexes
18. Locomotor system
19. Individual joint involvement
20. Disturbances in mukkutram
    i. Derangement of vatham
    ii. Derangement of Pitham
    iii. Derangement of kabam
21. Diagnostic Parameters
22. Involvement of Ezhu udal Thathukkal
23. Radiological Examination
24. Grading of Rheumatoid arthritis
25. Grading of result.

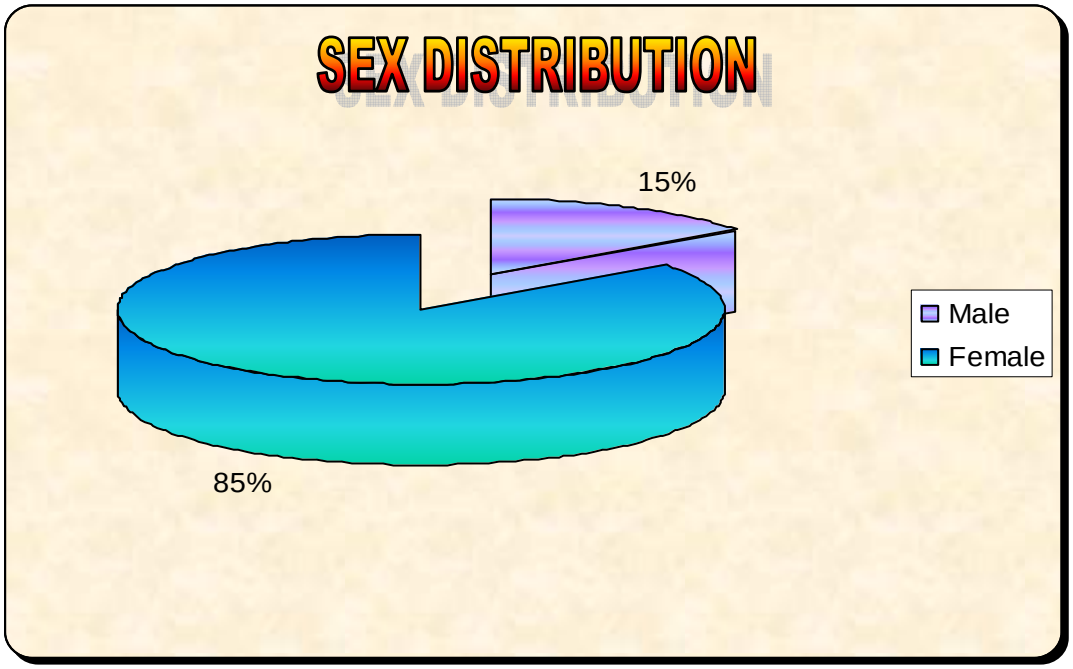
1. Sex Distribution

Table 1: Illustrates sex distribution and its relative percentage

SL. No	Sex	No of cases	Percentage
1	Male	3	15%
2	Female	17	85%

For this study 20 in patients were selected among them, out of 20 in patients 15% were males and 85% were females.

From the above table it is clear that, females were mostly affected than males.



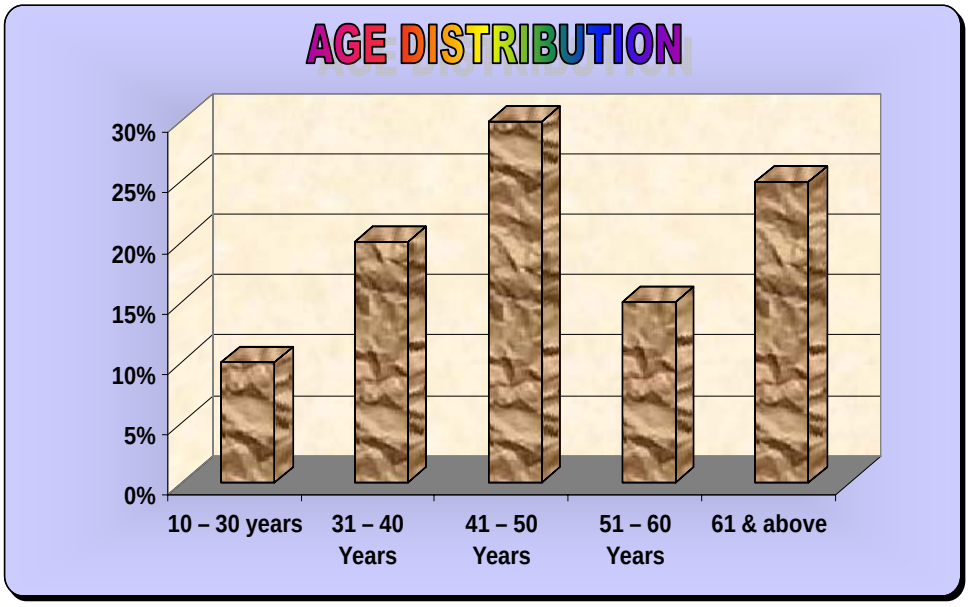
2. Age distribution

Table 2: Illustrates Age distribution and its relative percentage

SL. No	Age	No of cases	Percentage
1.	10 – 30 years	2	10%
2.	31 – 40 Years	4	20%
3.	41 – 50 Years	6	30%
4.	51 – 60 Years	3	15%
5.	61 & above	5	25%

Among 20 In patients 10% of cases were observed in the age group of 10 to 30, 20 % cases were observed in the age group 31 to 40, 30% of cases were observed in the age group of 41 to 50, 15 % of cases were observed in the age group of 51 to 60 and 25 % of cases were observed in the age group of above 60 years.

Majority of Cases were observed in age group of 41 – 50 years



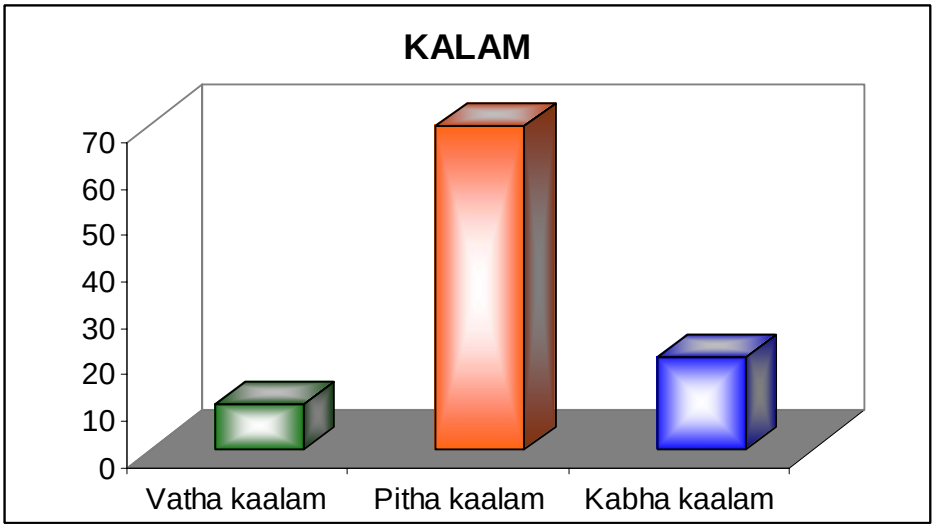
3. Kalam

Table 3: Illustrates the incidence of disease with respect to life distribution

SL. No	Kalam	No of cases	Percentage
1	Vatha kaalam (upto 33 years)	2	10%
2	Pitha kaalam(33-66 years)	14	70%
3	Kabha kaalam (above 66 years)	4	20%

Out of 20 In-patients 10% of cases were in the vatha kaalam, 70% of case were in the pitha kaalam, 20% of cases were in the kabha kaalam.

Most of the cases were in the pitha kaalam.



4. Constitution of the Body

Table 4: Illustrates the constitution of the body and its relative percentage.

SL. No	Constitution of the body	No of cases	Percentage
1	Vatha thegi	-	-
2	Pitha thegi	-	-
3	Kabha thegi	-	-
4	Thontha thegi	20	100%

Out of 20 in patients all the patients were Thontha thegi.

5. Gunam

Table 5: Illustrates the gunam

SL. No	Gunam	No of cases	Percentage
1	Sathuvagunam	-	-
2	Rajothagunam	16	80%
3	Thamogunam	4	20%

6. Paruvakalam

Table 6: Illustrates the seasonal incidence of the diseases.

SL. No	Paruvakalam	Months	No of cases	Percentage
1	Kaar kaalam	Avani-Puratasi (Aug 15 to Oct 14)	-	-
2	Koothir Kalam	Iyppasi-Karthigai (Oct 15 to Dec 14)	9	45%
3	Munpani kaalam	Margazhi – Thai (Dec 15 to Feb 14)	6	30%
4	Pinpani kaalam	Masi – Panguni (Feb 15 to Apr 13)	1	5%
5	Elavenil kaalam	Chithirai –Vaigasi (Apr 14 to Jun 14)	3	15%
6	Muthuvenil kaalam	Aani – Aadi (Jun 15 to Aug 14)	1	5%

Maximum number of cases were found to be admitted during koothirkaalam (Iyppasi-Karthigai).

7. Thinai

Table 7: Illustrates the Thinai.

SL. No	Thinai	No of cases	Percentage
1	Kurinji	-	-
2	Mullai	-	-
3	Marutham	19	95%
4	Neithal	1	5%
5	Palai	-	-

Out of 20 in patients 95% of cases were from Maruthanilam and 5% of cases from Neithal nilam.

8. Socio economic Status

Table 8: Illustrates the Socio economic status.

SL. No	Socio Economic Status	No of cases	Percentage
1.	Rich	-	-
2.	Middle class	4	20%
3.	Poor	16	80%

Out of 20 inpatients 80% of cases belong to poor socio economic status and 20% of cases belong to middle class. Poor people were mostly affected.

9.Aetiological factor

Table 9 : Illustrates the Aetiological factors.

SL. No	Precipitating factors	No of cases	Percentage
1	Positive family history	3	15%
2	Positive previous history	7	35%
3	Miscellaneous	10	50%

Out of 20 inpatients 15 % of cases had positive family history, 35% of cases had positive previous history and 50% of cases had Miscellaneous cause.

10.Mode of onset

Table 10: Illustrates the Mode of onset.

SL. No	Mode of onset	No of cases	Percentage
1	Acute	5	25%
2	Gradual	15	75%

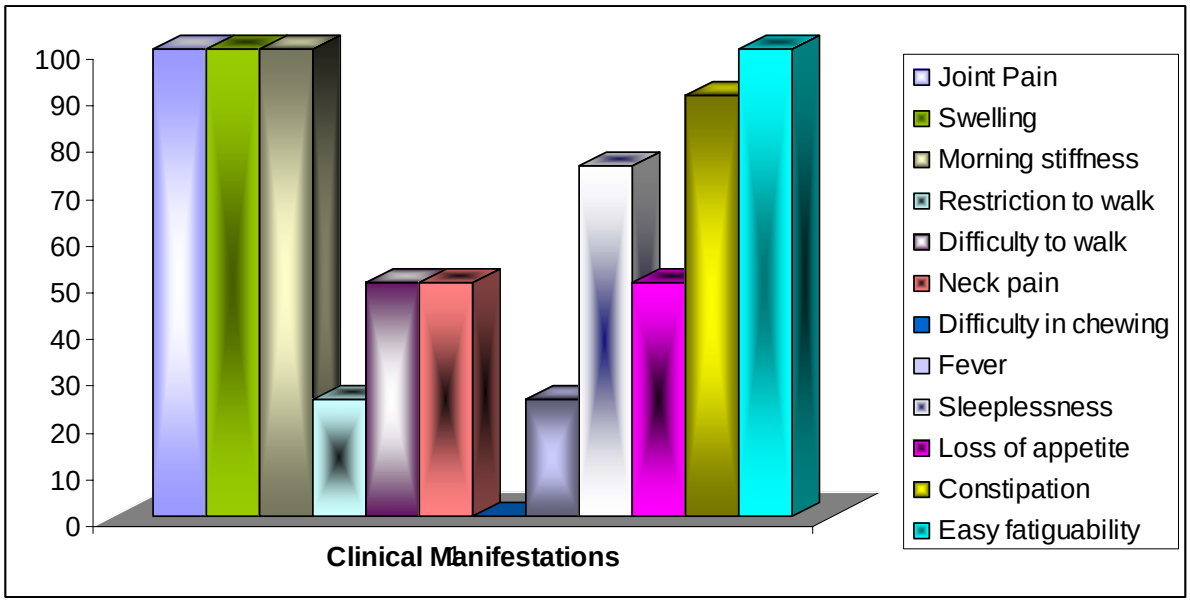
Out of 20 cases acute onset was observed in 25% of cases and gradual onset was observed in 75% of cases.

11.Clinical Manifestations

Table 11: Illustrates the symptoms.

S.No	Symptoms	No. of .cases out of 20	Percentage
1	Joint Pain	20	100%
2	Swelling	20	100%
3	Morning stiffness	20	100%
4	Restriction to walk	5	25%
5	Difficulty to walk	10	50%
6	Neck pain	10	50%
7	Difficulty in chewing	-	-
8	Fever	5	25%
9	Sleeplessness	15	75%
10	Loss of appetite	10	50%
11	Constipation	18	90%
12	Easy fatiguability	20	100%

Almost all cases were affected with symptoms of joint pain, Swelling, Morning stiffness and easy fatigability, 50% of the cases were affected with symptoms of difficulty to walk, loss of appetite and neck pain. 25% of cases were affected with the symptoms of restriction to walk and fever. 75% of cases were affected with the symptoms of sleeplessness. 90% of cases were affected with constipation.



12.Duration of illness

Table 12 illustrates the duration of illness.

S.No	Duration of illness	No. of cases	Percentage
1	Below 1 month	-	-
2	1-3 months	4	20%
3	3-6 months	4	20%
4	6-9 months	1	5%
5	9 months – 12months	4	20%
6	1-2 years	3	15%
7	Above 2 years	4	20%

Out of 20 In Patients

In 20 % of cases the duration of illness was from 1- 3 months

In 20 % of cases the duration of illness was from 3- 6 months

In 5% of cases the duration of illness was from 6- 9months

In 20% of cases the duration of illness was from 9 months - 12 months

In 15 % of cases the duration of illness was from 1 – 2 years

In 20 % of cases the duration of illness was above 2 years.

13.Systemic Examination

Table 13 illustrates systemic examination.

S.No	Signs	No. of cases	Percentage
1	Subcutaneous nodules	2	10%
2	Muscle wasting	2	10%
3	Ophthalmic manifestation	-	-
4	Hepatomegaly	-	-
5	Spleenomegaly	-	-
6	Respiratory system	-	-
7	Cardiovascular system	-	-
8	Central Nervous system	-	-

Out of 20 In Patients 10 % of cases had subcutaneous nodules and 10% of cases had muscle wasting.

14. Gradation of Pain, joint swelling and Restricted Movements

Table 14 illustrates grades of signs and symptoms.

S.no	Sign and Symptoms	Mild		Moderate		Severe	
		No.of cases	Percentage	No.of cases	Percentage	No.of cases	Percentage
1	Pain	6	30	10	50	4	20
2	Joint Swelling	10	50	7	35	3	15
3	Restricted Movement	1	5	3	15	1	5
4	Muscle wasting	2	10	-	-	-	-

Among 20 In patients, pain was mild in 30 % of cases, moderate in 50 % of cases and severe in 20 % of cases. Joint swelling was mild in 50% of cases, moderate in 35% of cases and severe in 15% cases , Restricted movement was mild in 5% of cases moderate in 15% of cases and severe in 5% of case.

No severe muscle wasting are noted.

15.Duration of morning Stiffness

Table 15 illustrates the duration of morning stiffness.

S.No	IP . NO	Duration of morning Stiffness	
		Before Treatment in mts	After Treatment in mts
1	783	30 -70	20-40
2	931	60 -90	30-60
3	999	60 – 120	20-60
4	1062	70 – 100	60-90
5	165	15 – 30	10-20
6	2325	80 – 100	60-100
7	2461	60 – 120	30-90
8	2531	30 – 80	10-30
9	2446	120 – 160	60-140
10	2719	160 – 180	30-60
11	2849	60 – 90	30-60
12	2642	100 – 120	90-100
13	2352	30 – 60	20-30
14	2869	30 – 60	20-40
15	2857	60 – 120	30-60
16	2953	90 – 120	60-100
17	64	30 – 60	20-40
18	2849	100 – 120	60-100
19	22	60 – 80	30-60
20	338	60 -180	20-60

Among 20 In patients all the cases had morning stiffness ranging from 1 hour – 3 hours

16. Deformites of joints

Table 16 illustrates deformities of joints

S.No	Deformites of Joints	No. of cases	Percentage
1	Interphalangeal joints	20	100%
2	Metacarpo phalangeal joints	10	50%
3	Wrist joint	6	30%
4	Elbow joints	8	40%
5	Shoulder joint	6	30%
6	Hip joint	3	15%
7	Knee joint	10	50%
8	Ankle joint	5	25%
9	Metatorso phalangeal joint	20	100%
10	cervical Spine	10	50%

Among 20 Inpatients 100% of cases had deformities in the interphalangeal and metatorsophalangeal joints 50% of cases had deformities in the metacarpophalangeal, Knee joint and cervical spine. 30% of cases had the deformities in the wrist joint and shoulder joint . 40% of cases had the deformities in the Elbow joint. 25% of cases have the deformities in the ankle joint and 15% of the cases had the deformities in the hip joint.

17 . Deep tendon Reflex

Table 17 illustrates results of deep tendon reflexes.

S.no	Deep tendon reflexes	Exaggerated		Diminished/ absent	
		No. of cases	Percentage	No. of cases	Percentage
1	Jaw	-	-	-	-
2	Biceps	3	15	-	-
3	Triceps	3	15	-	-
4	Supinator	-	-	-	-
5	Knee	1	5	-	-
6	Ankle	1	5	-	-

Out of 20 In patients 15% of cases had exaggerated Biceps and Triceps, 5% of cases had exaggerated knee jerk and ankle jerk.

18. Locomotor System

Table 18 Illustrates involvement of Extremites.

S.no	Involvement of extremities	No. of cases	Percentage
1	Upper extremity	12	60%
2	Lower extremity	6	30%
3	Both upper and lower extremity	2	10%

Most of the cases had the history of upper extremity involvement .

19. Incidence of joint involvement

Table 19 illustrates incidence of joint involvement.

S.No	Joints involvement	No. of cases	Percentage
1	Proximal inter phalangeal Joint	20	100%
2	Metacarpo phalangeal joint	6	30%
3	Wrist joint	6	30%
4	Elbow joint	8	40%
5	Shoulder joint	6	30%
6	Temporo mandibular joint	-	-
7	Sterno clavicular joint	-	-
8	Cervical Joint	10	50%
9	Hip joint	3	15%
10	Knee joint	10	50%
11	Metatarso phalangeal joint	20	100%
12	Ankle joint	5	20%

It was observed Metacarpo phalangeal joints and Metatarso phalangeal joints were involved in cent percentage of cases. Knee joint, Cervical joint were involved in 50% of cases. Elbow joint was affected in 40% of cases. Metacarpo phalangeal joint, wrist joints and shoulder joint were affected in 30% of cases. Hip joint was affected in 15 % of cases. Ankle joint was affected 20% of cases.

20. Disturbance in Mukkutram

Table 20 illustrates the disturbances in Mukkutram

A. Disturbance in Vatham

S.No	Vatham	No. of cases	Percentage
1	Pranan	-	-
2	Abanan	18	90
3	Viyanan	20	100
4	Uthanan	-	-
5	Samanan	20	100
6	Nagan	-	-
7	Koorman	-	-
8	Kirukaran	-	-
9	Devathathan	15	75
10	Thananjeyan	-	-

Out of 20 cases observed Viyanan and Samanan were affected in all cases. Abanan was affected in 90% of cases and Devathathan was affected in 75% of cases.

B. Disturbances in Pitham

S.no	Pitham	No. of cases	Percentage
1	Anarpitham	10	50
2	Ranjagam	15	75
3	Prasakam	-	-
4	Alosakam	-	-
5	Saathagam	20	100

Out of 20 cases Ranjagam was affected in 75% of cases. Anarpitham was affected in 50% of cases. Saathagam was affected in almost all cases.

C. Disturbances in Kabham

S.no	Kabham	No. of cases	Percentage
1	Avalambagam	-	-
2	Kilethagam	10	50%
3	Pothagam	-	-
4	Tharpagam	-	-
5	Santhigam	20	100%

Santhigam was found to be affected in almost all cases and kilethagam in 50 % of the cases.

21. Diagnostic Parameters

Table 21 illuastrates the conditions of the diagnastic parameter.

S.no	Envagai thervugal	NO. of cases	Percentage
1	Naa	16	80%
2	Niram	-	-
3	Mozhi	-	-
4	Vizhi	-	-
5	Naadi	20	100
6	Sparism	20	100%
7	Malam	16	80%
8	Moothiram	-	-

In almost all the cases it was observed that Naadi and Sparism were affected. Naa and Malam were affected in 80% of cases.

In all case Neerkkuri and Neikuri were studied. Neikkuri was observed like Aravilaazhi in 60% of the in patients. it was observed as Aazhiyir aravu in 40% of in patient cases.

22. Involvement of Udal Thathukkal

Table 22 illustrated the conditions of the udal Thathukkal.

S.no	Udal Thathukkal	No. of cases	Percentage
1	Saaram	20	100%
2	Senner	20	100%
3	Oon	20	100%
4	Kozhuppu	20	100%
5	Enbu	20	100%
6	Moolai	10	50%
7	Sukkilam/ Suronitham	-	-

In almost all cases Saaram, Senneer, Oon , Kozhuppu and Enbu were affected. Moolai thathu was affected in 50% of cases.

23. Radiological examination

S.No	IP. No	Radiological Examination	Findings
1.	783	Both wrist joints AP view	Osteoporosis
2.	931	Both Knee joints AP view	Subchondral sclerosis seen in both tibia
3.	999	Both hands AP view	Rheumatoid Arthritis
4.	1062	Both Knee joints AP view	Osteoporosis
5.	165	Both wrist joints AP view	Rheumatoid Arthritis
6.	2325	Both hands AP view	Normal study
7.	2461	Both wrist joints AP view	Rheumatoid Arthritis
8.	2531	Both hands AP view Both Knee joints AP view	Rheumatoid Arthritis
9.	2446	Both Knee joints AP view	Rheumatoid Arthritis
10.	2719	Both wrist joints AP view	Normal Study
11.	2849	Both wrist joints AP view	Rheumatoid Arthritis

12.	2642	Both hands AP view	Osteoporosis
13.	2352	Both wrist joints AP view	Rheumatoid Arthritis
14.	2869	Both hands AP view Both knee joints AP view	osteophytes seen in phalanges (Left) thumb Bilateral osteo arthiritis
15.	2857	Both knee joints AP view Shoulder joint (left) AP view Cervical spine Oblique view	Bilateral osteo arthiritis Peri arthiritis Cervical spondylosis
16.	2953	Both hands AP view Shoulder Joint (left)	Osteoporosis Periarthiritis
17.	64	Cervical spine Oblique view Both ankle joint lateral view	Cervical spondylosis Bilateral calcaneal spur, degenerative changes seen in calcanium.
18.	2849	Lumbo sacral spine AP view Both hands AP view	Lumbar spondylosis Rheumatoid arthritis
19.	22	Both hands AP view Both knee joints AP view	Peri arthritis Peri arthritis
20.	338	Both hands Ball catcher's view Both ankle with feet AP view	Rheumatoid arthritis

24. Grading of Rheumatoid Arthritis

Table 24 illustrates grading of Rheumatoid Arthritis.

S.no	Grade	No. of cases	Percentage
1	I	-	-
2	II	4	20%

3	III	12	60%
4	IV	4	20%

Grade I : No restriction of ability to perform normal activities

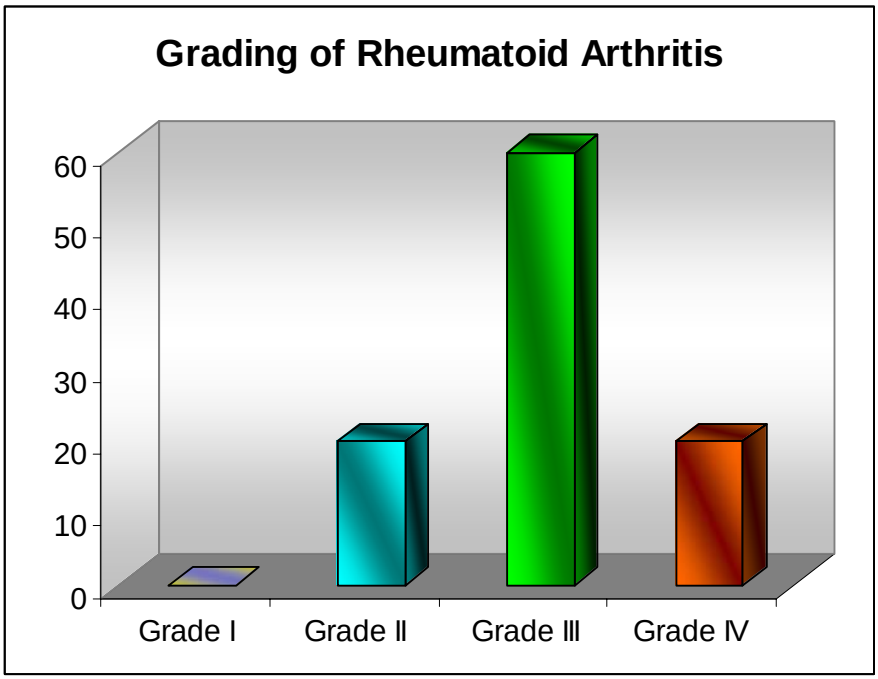
Grade II : Moderate restriction but with an ability to perform most activities of daily life.

Grade III : Marked restriction with an inability to perform most activities of daily living and occupations

20 % of cases belonged to Grade II

60 % of cases belonged to Grade III

20 % of cases belonged to Grade IV



Assessment of the effect of Therapy

The patients were treated with the trail medicines, at the end of the treatment the results were categorized as follows

Good : Complete subsidence of pain and disappearance of swelling

Fair : Relief of pain, reduction in swelling and increasing range of movement

Poor : No improvement.

25. Gradation of Results:

Table 25 illustrates Gradation of Results.

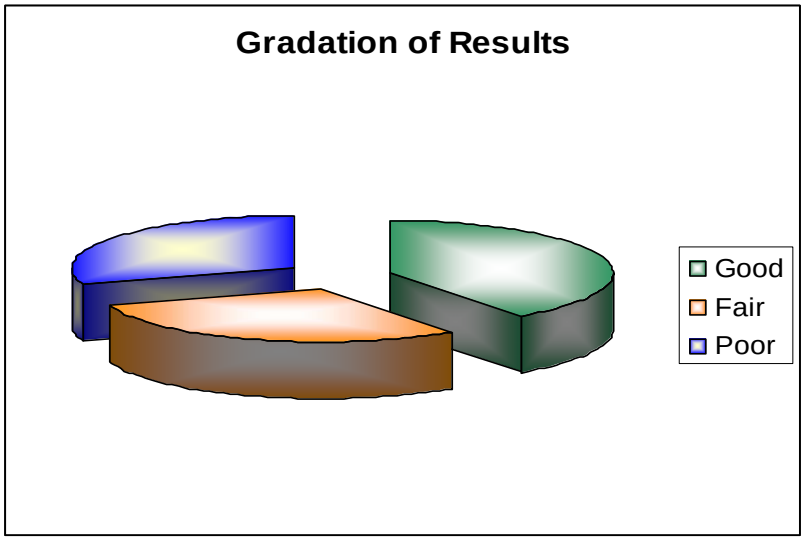
S.no	Grade	No. of cases	Percentage
1	Good	8	40%
2	Fair	6	30%
3	Poor	6	30%

Out of 20 In patients

40 % of cases showed good response

30 % of cases showed Fair response

30 % of cases showed Poor response



DISCUSSION

For this Dissertation study out of 25 patients the author had selected 20 Inpatients and they were admitted in the In-patient ward Government Siddha Medical College Hospital, Palayamkottai. A case sheet was prepared and maintained individually for all the 20 Inpatients.

Sex distribution

Among the 20 patients 3 were male and 17 were female. From this study the sex incidence was higher in females (85%) than in male (15%)

Indicating Valiazhal keelvayu is predominate in females

Age distribution

Among 20 cases 10% of cases were in the age group between 10 – 30 years . 20% of cases were in the age group of 31 – 40 years. 30% of cases were in the age group of 41 – 50 years. 15% of cases were in the age group 51-60years and 25% of cases were in the age group of 61 and above .

No age group is exempted for Rheumatoid arthritis but the usual incidence is during 4th and 5th decade.

Kaalam

According to siddha literature life span has divided into three kalam. They are

Vatha kaalam	-	First 33 years and 4 months
Pitha kaalam	-	Second 33 years and 4 months
Kabha kaalam	-	Third 33 years and 4 months

From this study the occurrence of this disease is as follows

Vatha kaalam 10%

Pitha kaalam 70%

Kabha kaalam 20%

The maximum number of cases were observed in pitha kaalam which correlates with that of modern concept age incidence 4th and 5th decades.

Paruvakaalam

45% of cases were admitted in koothirkaalam

30% of cases were admitted in Munpanikaalam

5% of cases were admitted in pinpanikaalam

15% of cases were admitted in Elavenil kaalam

5% of cases were admitted in Muthuvenil kaalam

In koothir kaalam vatha gets thannilai adaithal and pitha gets vetrunilai valarchi . So this disease occurs derangement of vatham and pitham due to seasonal variations that leads to thannilai valarchi and vetrunilai valarchi of vatham and pitham in the body.

Thinai

Maximum, number of cases from maruthanilam.

Aetiology

15% of patients had a positive family history.

35% of patients had a previous history.

50% of patients are affected by miscellaneous reason.

Literary evidence indicates that the disease Vali azhal keel vayuis common in winter and genetic predisposition as a cause for Vali azhal keel vayu.

Mode of onset

The onset of Vali azhal keel vayuwas acute in 25% and gradual in 75% .

The incidence was more in gradual onset.

Clinical manifestations

Vali azhal keel vayu present with articular and extra articular manifestations in this study both this manifestation were noticed and recorded. Cent percent of patients had joint pain, swelling, Easy fatigue and morning stiffness, 25% of cases had restriction to walk and fever, 50% of cases had difficult to walk, neck pain and loss of appetite, 75% of cases had sleeplessness, and 90% had habitually constipated.

Joint pain was assessed by the words of the patients and was classified into mild moderate and severe. Mild pain was noticed in 30% of cases moderate pain was noticed in 50% of cases and severe pain was noticed in 20% of cases.

Swelling of the affected joints were noticed in all the cases. Swelling of the joints were measured by means of a non elastic measurable tape. Areas of maxium level of swelling around the joints were measured both before and after treatment. The joints subjected to measurements were knee joint, ankle joint, wrist joint, proximal interphalangeal joint of index finger, middle finger and Little finger.

The degree of joint swelling was observed . Thus mild swelling in 50% of cases, moderate swelling in 35% of cases and severe swelling in 15% of cases measurements were taken after treatment reveals that 40% of cases under regular treatment had marked reduction in swelling 30% of cases showed mild reduction and 30% showed no signs of improvement.

Almost all the patients experienced early morning stiffness ranging from 1 to 3 hours . After treatment it gradually came down to 60 minutes.

Restricted movements or decreased range of movements were seen in 25% of cases . Asking the patients to move the joint in a particular direction assessed restricted movements of patients when the active movements of other joint was impossible movements were considered as restricted or decreased range of motion.

After treatment with **Mudakkuvatha chooranam** (internally) and **vatha thylam** (Externally) along with Thokkanam in most of the cases increased range of movement was noticed.

Involvement of extremities

The incident of initial involvement of joints of upperlimb was noted in 60% of cases and in 30% of cases in the lower limb was involved first. 10% of cases involved both extremities.

Incidents of individual joint involvement

Proximal interphalangeal and metatarsophalangeal joints were involved in cent percentage of cases. Metacarpophalangeal, wrist, shoulder joints were affected in 30% of cases. Elbow joint was affected in 40% of cases. Cervical spine, knee joints were affected in 50% of cases. Hip joint was affected in 15% of cases. Ankle joint was affected in 20% of cases.

Deformities of joints

Cent percentage of cases had deformity in the interphalangeal joints. 50% of cases had flexion deformity of the knee joint and 50% of cases had deformity of the spine.

Elicitation of extra articular manifestations

Along with the symptoms told by the patient certain signs were also noted. These include Hepatomegaly, spleenomegaly, presence of subcutaneous nodules, Respiratory symptoms, cardiovascular symptoms, muscle wasting, reflexes and ophthalmic

manifestation etc., 10% of cases had mild muscle wasting in the thenar and hypothenar muscles and subcutaneous nodules.

Hepatomagaly and spleenomegaly were not present in any case. Likewise ophthalmic manifestations and cardiovascular manifestations were not present .

Uyir thathukkal

Uyirthathukkal constitute vatham, pitham and kabam.

Disturbances in Uyir thathukkal lead to disease entities.

Disturbances in vatham

Abanan was affected in 90% of cases . Viyanan and samanan were affected in cent percent of cases, Devathathan was affected in 75% of cases.

Affected Abanan produce constipation. Affected viyanan produce pain and restriction of movement in joints.

Affected samanan produce loss of appetitie. Affected Devathathan produce sleeplessness.

Disturbances in pitham

Among 20 inpatient sathaga pitham was affected in cent percentage of patients causing difficulty to carryout regular works.

Anarpitham was affected in 50% of Inpatient and cause loss of appetite.

Ranjaga pitham was affected in 75% of the In patients producing anaemia.

Disturbances in Kabham

Among 20 in patients santhigam was affected in cent percentage of cases . Affected santhigam cause pain and swelling in the joints.

Kilethagam was deranged in 50% of Inpatients cause loss of appetite.

Involvement of Ezhu Udal Thathukkal

Among 20 In-patients Saaram, Senneer, Oon, Kozhuppu, Enbu were affected in cent percent of the cases , Moolai thathu was affected in 50% of the case and Sukkilam / Suronitham was found normal.

Affected saram produced easy fatiguability (100%)

Affected senneer produced anaemia (100%)

Affected Oon produced muscle wasting (100%)

Affected kozhuppu produced pain in the joints (100%)

Affected Enbu produced joint pain (100%)

Affected Moolai produced swelling of the interphalangeal joints.

Envagai thervugal

In 60% of In-patient the naadi was vathapitham and 40% belonged to pithavatham.

Sparisam was affected in cent percent of Inpatient producing warmth in the painful joints Naa was affected in cent percentage of the Inpatient producing either coated tongue due to constipation or paleness of the tongue due to anaemia.

Malam was affected in 90% of inpatient cases producing constipation.

Neikkuri was observed like aravilaazhi in 60% of the inpatient. It was observed as Aazhiyir aravu in 40% of inpatient cases.

Grading of Rheumatiod Arthritis.

Among 20 Inpatients

20% of the cases belonged to Grade II

60% of the cases belonged to Grade III

20% of the cases belonged to Grade IV

Investigation

Routine Examinations of blood, urine and stools were done during the time of admission and discharge.

Among 20 In – patients 70% of cases showed decreased Hb% and cent percent of cases showed increased ESR.

The investigations include Blood sugar, Blood urea, serum cholesterol, RA factor. Some of the patients were advised to do the test outside lab with their consent not in compulsion.

The patients were also subjected to radiological examinations.

Serological test for syphilis was done in some patients.

X- ray both hands with wrist joints

Anteroposterior view was taken in 11 inpatients. If showed osteoporosis, reduction in interphalangeal joint spaces, synovial thickening, periarticular erosions, soft tissue swelling, deformities etc.,

X – ray of both the knee joints

Anteroposterior and lateral view was taken in 12 in patients the reports revealed osteoporosis with reduction of joint space.

X-ray Both feet with ankle joints

Anteroposterior view was taken in 2 In patients synovial thickening, sclerosis and narrowing of the joint space were noted.

X-ray cervical spine

Oblique view was taken in 2 In – patients.

The pharmacological analysis of Mudakkuvatha chooranam

- ❖ Moderate acute anti inflammatory action
- ❖ Moderate chronic anti inflammatory action
- ❖ Significant anti pyretic action
- ❖ Significant analgesic action

Vatha Thylam

- Significant acute anti inflammatory action

Biochemical analysis of the trial drug shows the presence of sulphate, ferrous, reducing sugar, aminoacid.

With the above studies the management of the disease brought by viraeshanam with vellai ennai 15ml at early morning in empty stomach with warm water before the administration of trial drug.

Thokkanam was done to all patients after the application of external oil and then advised to take hot water fomentation .

All patients were advised to take complete bed rest before the subsidement of the inflammation.

Yoga and regular simple exercise were advised to follow up.

SUMMARY

The disease Vali azhal keel vayu which is correlates with the Rheumatoid Arthiritis in modern medicine.

The aetiology, pathology, pathogenesis, clinical features, course and prognosis of the disease were collected from numerous literatures both in siddha system as well as modern medicine.

About 70 cases were treated as In-patient and Out-patient cases in post graduate department of sirappu maruthuvam, Government siddha medical college , palayamkottai.

The diagnosis of Rheumatoid Arthritis was based on the criteria mentioned in American Rheumatoid Association and Graded according to the CECIL Textbook of medicine . After through evaluation of history, clinical findings and laboratory results, Envagai thervugal were used for the diagnostic purpose.

The diagnosing criteria mainly the morning stiffness, joint pain,swelling and restriction to walk are noted for the clinical accessment of the prognosis.

The present study was chosen with an eager to treat Vali azhal keel vayu with the mudakku vatha chooranam internally and vatha thylam externally.

The efficacies of the medicines Mudakku vatha chooranam and vatha thylam were studied during the course of this research.

Clinically marked reduction of pain and swelling in the joints along with an improvement to do their day to day activities, while treated with the trial medicine.

No signs of complications were reported.

Laboratory investigations were encouraging after the treatment. Clinically the drugs were free from adverse effects.

CONCLUSION

Clinically the drugs were free from adverse effects. In this research the treatment of Vali azha keel vayu with Mudakkuvatha chooranam and vathathylam showed remarkable improvement clinically.

Hereby the author concluded that the treatment with mudakku vatha chooranam and vatha thylam showed remarkable improvement.

It will be very effective in the point of efficacy, safety and low cost in the treatment of Vali azhal keel vayu.

Annexure - I

Preparation and properties of the trial medicines

Mudakku vatha chooranam (Internal Medicine)

Ingredients

1. Nannari verpattai chooranam	-	10 parts
2. Parangi pattai chooranam	-	10 parts
3. Seemai Amukkara chooranam	-	10 parts
4. Chittarathai Choornam	-	5 parts

Preparation

These four chooranams are mixed together and bottled up.

Dose and adjuvant

10 to 20 graines (650 – 1300mg) may be given thrice a day well mixed with honey or other suitable anupanams.

Indications

All sorts of joint lesions including rheumatoid arthritis and skin lesions are controlled.

Evidence

Siddha Research Pharmacopia published by G.D.Nayudu ILWA ltd., Coimbatore, year 1973. page – 118.

சீமை அமுக்கரா

English Name	:	Winter Cherry
Botanical Name	:	Withania Somnifera
Family	:	Solanceae
Part used	:	Root and Leaves
Suvai	:	Kaippu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Tonic, alterative, diuretic, nervine sedative, deobstruent.

Chemical Constituents

Somniferin, reducing sugar, phytosterol, mixture of saturated and unsaturated fatty acids.

Therapeutic uses

Root is used in rheumatism, all cases of general debility. In rheumatism decoction of the root is used internally. The powder of the root given internally with honey cures the diseases due to vatham and kabham.

குணம்

"கொஞ்சந் துவர்ப்பாங் கொடியகபம் சூலையரி
மிஞ்சுகரப் பான்பாண்டு வெப்பதப்பு - விஞ்சி
முகவுறு தோடமும்போ மோகம் அன லுண்டாம்
அசுவகந் திக்கென் றறி"

- அகத்தியர் குணவாகடம்

கொடிய கபம், சூலை, கரப்பான், பாண்டு, சுரம், வீக்கம், தோடம் நீங்கும் மோகம், பசித்தீயை உண்டாக்கும்.

பறங்கிப் பட்டை

English Name : China Root, Bamboo Briar root

Botanical Name : Smilax China linn

Family : Liliaceae

Part used : Rhizomes

Suvai : Inippu

Thanmai : Thatpam

Pirivu : Inippu

Therapeutic Action

Alterative, antysyphilitic, aphrodisiac

Chemical constituents and pharmacological action

Tannin, resin and cinchonin along with smilacin and a steroidal saponin yielding on hydrolysis. Sarsasapogenin have been identified in the tuberous roots. The presence of flavonoid glycosides and three saponins one of which yield diosgenin has also been reported. Seeds yield 11.1% fatty oil and leaves contain rutin.

குணம்

"தாகம் பலவாதந் தாது நட்டம் புண்பிளவை
மேகங் கடிகிரந்தி வீழ்மூலந் - தேகமுடன்
குட்டை பகந்தமேற் கொள்வமனம் போம்பறங்கிப்
பட்டையினை யுச்சரித்துப் பார்"

- குணபாடம் மூலிகை வகுப்பு

பறங்கிப் பட்டையினால் நீர்வேட்கை, பற்பல வளிநோய்கள், புண், நீரழிவு, கடிவிடச் சிரங்கு, மூலமுளை, முடக்கு வாதம், குட்ட நோய், ஐயம், பகந்தரப்புண், வாந்தி இவை நீங்கும் ஆண்மை உண்டாகும்.

Indication

The decoction is used with the three myrobalans in cases of piles, fistula, carbuncle, diabetes, digestive, laxative, depurative, aphrodisiac, diuretic, febrifuge and tonic. They are useful in

syphilis leprosy, skin diseases, epilepsy, insanity, scrofula, vitiated conditions of vatha, flatulence, dyspepsia, colic, neuralgia, constipation, helminthiasis, psoriasis, fever, strangury, increase the semen count and general debility.

நன்னாரி

English Name : Indian sarasparilla
Botanical Name : Hemidesmus Indicus
Family : Asclepiadaceae
Part used : Root
Suvai : Inippu, Siru Kaippu
Thanmai : Thatpam
Pirivu : Inippu

Therapeutic Action

Alterative, Tonic, Demulcent, Diuretic, Diaphoretic.

குணம்

"சலதோஷம் பித்தமதி தாக முழலை
சலமேறு சீதமின்னார் தஞ்சூ - டுலகமதிற்
சொன்மது மேகம் புண் சுரமிவையெ லாமொழிக்கு
மென்மதுர நன்னாரி வேர் "

நன்னாரி வேரை, கிரமமப்படி உபயோகிக்க நீரேற்றம், பித்தநோய், தாகம், வாய்நீர்ச் சுரப்பு, புணர்ச்சியின் சூடு, மதுநீர், கிரந்தி, சுரவேகம் இவைகள் போம்.

- பதார்த்த குணவிளக்கம் மூல வர்க்கம்

Indication

Nannari has diaphoretic, diuretic, tonic, laxative actions, lesions, inflammation and it is good for tooth ache.

It is used in treating loss of appetite, fever, syphilis, leucorrhoea and inflammation of urinary passage. A liquid extract of it is given as a tonic for skin diseases and as an alterative in chronic rheumatism.

- Medicinal plants in Srilanka

Phyto active

The flavanoid glycosides identified in the flowers of Hemidesmus indicus were hyperoside, isoquercitin and rutin where as in the leaves, only hyperoside and rutin were identified.

(Subramaniam & Nair) 1968

Tannin are present in leaves in an amount of 2.5%. The roots were reported to contain sitosterol, a new ester identifies as lupeol octacosanoate in addition to the known compounds V12 lupeol – amyring, lupeol acetate and hexatria contain.

சிற்றரத்தை

English Name	:	Lesser Galangal
Botanical Name	:	Alpina officinarum
Family	:	Zingiberaceae
Part used	:	Rhizome
Suvai	:	Karppu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Expectorant, Febrifuge, stomachic.

குணம்

”வாதபித் தங்கரப்பான் வாதஞ் சிரோரோகஞ்
சேர்ந்தகப முத்தோடஞ் சீதமொடு - நேர்ந்தசுரம்
மற்றரத்தைக் காட்டி வருமிரும லுந்தீரும்
சிற்றிரத்தை வன்மருந்தால் தேர்”

- தேரையர் குணவாகடம்

வளி, ஐயக்குற்றங்கள், கரப்பான், வாயு, தலைநோய், சீதளம், இருமல், பல சுரம், இவைகளைப் போக்கும்.

வாதத் தைலம் (வெளி மருந்து)

சேரும் சரக்குகள்

- ❖ புங்கம் நெய்
- ❖ வேப்பம் நெய்
- ❖ ஆமணக்கு நெய்
- ❖ புன்னை நெய்
- ❖ எள் நெய் - வகைக்கு ½ படி

- ❖ வெள்ளுள்ளி
- ❖ வசம்பு
- ❖ காயம்
- ❖ திப்பிலி
- ❖ சுக்கு
- ❖ மிளகு
- ❖ ஓமம்
- ❖ கிராம்பு
- ❖ சதகுப்பை
- ❖ கடுகு ரோகிணி
- ❖ சித்திரமூலம் - வகைக்கு ½ பலம்
- ❖ காடி - தேவையான அளவு

செய்முறை:

மேற்கூறிய கடைச் சரக்குகளை காடி விட்டு அரைத்து கற்கமாக்கி மேற்படி நெய்யில் கலந்து எரித்து மெழுகு பதத்தில் இறக்கி பத்திரப்படுத்தவும்.

பிரயோகம்:

வெளிப் பிரயோகம்.

தீரும் நோய்கள்

80 வாதமும் போகும்.

ஆதாரம்

வைத்திய ரத்தினச் சுருக்கம் (பக்கம். 45)

மிளகு (Milagu)

Common Name	:	Milagu
Botanical Name	:	Piper nigrum
Family	:	Piperaceae
Part used	:	Dried unripe fruit
Suvai	:	Kaippu, Karppu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Anti periodic, Anti vatha, Anti dote.

குணம்

"சீதசுரம் பாண்டு சிலேத்மங் கிராணி குன்மம்
வாதம் அருசிபித்தம் மாமூலம் - ஓதுசன்னி
யாசமபஸ் மாரம் அடன்மேகம் காசமிவை
நாசங் கறிமிளகினால்"

- அகத்தியர் குணவாகடம்

சீத சுரம், பாண்டு, கபம், கிராணி, குன்மம், வாதம், ருசியின்மை, பித்தம், மூலம், அபஸ்மாரம், மேகம், காசம் ஆகியவை தீரும்.

Chemical Constituents

Chavicine, piperine, piperidine, piperetine, aromatic oil.

ஆமணக்கு நெய் (Castor Oil)

English Name	:	Castor Oil
Botanical Name	:	Ricinus Communis
Family	:	Euphorbiaceae
Part used	:	Oil
Suvai	:	Kaippu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Anti vatha

குணம்

"ஆமணக் கெண்ணெய் தன்னை யணிநில மறியக் கேண்மின்
பூமணச் சந்துதோறும் பொருந்திய வாதம் போக்கும்
தீமந்தந் தானும் போக்குந் திகழ்வுடன் விரைவுமுண்டாம்
தீமனக் குடலில் வாதங் சேர்குடலேற்றம் போமே"

- அகத்தியர் குணவாகடம்

ஆமணக்கு நெய்யால் சந்துகள் தோறும் ஏற்படும் வாதம், பித்த நோய்கள், மந்தம், குடல்வாதம், குடல் ஏற்றம், நீங்கும்.

வேப்பம் நெய் (Neem Oil)

English Name	:	Neem Oil
Botanical Name	:	Azadirachta Indica
Family	:	Meliaceae
Part used	:	Oil
Suvai	:	Kaippu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

பித்தகாரி, கிருமிநாசினி, சுரஹரகாரி, வெப்பமுண்டாக்கி, அழுகலகற்றி, பூச்சிக்கொல்லி.

Chemical Constituents

Nimbin, nimbinin, nimbidin, azadirachtin.

குணம்

"வாதம்போம் பித்தமிகு மாறாக்கி ரந்தியொடு
மோது கரப் பான்சிரங்கு முன்னிசிவும் - ஓதுடலின்
நாப்ப ணுறுசுரமு நாடுசந்தி யுந்தொலையும்
வேப்பநெய் யென்றொருகால் விள்ளு"

- பதார்த்த குண விளக்கம்

வேம்பின் எண்ணெய்க்கு, மகாவாதம், கிரந்தி, கரப்பான், சிரங்கு, சுரம், சளி ஆகியவை நீங்கும்.

வசம்பு (Sweet flag)

English Name	:	Sweet flag
Botanical Name	:	Acorus Calamus
Family	:	Araceae
Part used	:	Rhizome
Suvai	:	Karppu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Stimulant, Stomachic, Antiperiodic, Carminative, Nauseant, Emetic, Disinfectant, Germicide.

Chemical Constituents

Acorin, Acoretin, Calamin, Starch, Calamen (நறுமண எண்ணெய்), Calamenol, Asarone.

குணம்

”பாம்பாதி நஞ்சாற் புதப்புண் வலிவிடபாகங் குன்மம்
சூம்பா நிரத்தபித் தம்முக நாற்றம்வன் சூலைசந்தி
வீம்பாம்மை காசம் பிலீகஞ் சிலிபதம் வீறிருமல்
தாம்பாங் கிருமி யிவையெகு மாசிவ சம்பினையே”

- பதார்த்த குணவிளக்கம்

எல்லா நஞ்சுகள், புண் வகைகள், ஐவகைவலி, குன்மம், இரத்த பித்தம், வாய்நாற்றம், சூலை, முப்பிணி, இருமல், ஈரல் நோய்கள், யானைக்கால், நாடாப்புழு ஆகியவை போகும்.

Indication

நாட்பட்ட கீல்வாயு நோய்கட்கு காய்ச்சுக்கட்டியுடன் வசம்பைச் சேர்த்து நீர் விட்டரைத்துப் பற்றிடலாம்.

திப்பிலி (Long Pepper)

English Name : Long Pepper
Botanical Name : Piper longum
Family : Piperaceae
Part used : அரிசி
Suvai : Karppu
Thanmai : Veppam
Pirivu : Inippu

Therapeutic Action

Stimulant, Carminative.

Chemical Constituents

Piperine

குணம்

"கட்டி யெதிர்நின்று கடுநோயெ ல்லாம்பணியும்
திட்டி வினையகலும் தேகமெத்த - புட்டியாம்
மாமனுக்கு மாமனென மற்றவர்க்கு மற்றவனாங்
காமனெனுந் திப்பிலிக்கும் கை "

- தேரன் வெண்பா

கடுமையான ஐயப்பிணிகளை அகற்றி, உடற்கு வன்மை அளித்திடும்.

சுக்கு (Dried Ginger)

English Name : Dried Ginger
Botanical Name : Zingiber officinalis
Family : Zingiberaceae
Part used : Rhizome
Suvai : Karppu
Thanmai : Veppam
Pirivu : Karppu

Therapeutic Action

Stimulant, Stomachic, Carminative.

Chemical Constituents

Phellandrene, Gingerol, Gingerin.

குணம்

” வாதப் பிணிவயி றூதற் செவிவாய்
வலிதலை வலிகுலை வலியிரு விழிநீர்
சீதத் தொடுவரு பேதிப் பலரோ
சிகமலி முகமக முகமிடி கபமார்
சீதச் சுரம்விரி பேதச் சுரநோய்
தெறிபடுமெனமொழி குவர்புவி தனிலே
ஈதுக் குதவுமி தீதுக் குதவா
தெனும் விதி யிலைநவ சுறுகுண முனவே ”

(தேரையர் குணவாகடம்)

வாதப்பிணி, வயிறூதல், செவி, வாயுவலி, தலைவலி, வயிற்றுவலி முதலானவைகளை நீக்கும் குணம் சுக்கிற்கு உண்டு.

சதகுப்பை (Dill)

English Name	:	Dill
Botanical Name	:	Anethum Graveloens
Family	:	Umbelliferae
Part used	:	Seed
Suvai	:	Inippu, Karppu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Carminative, deobstruent, diuretic, emmenagogue, stimulant, stomachic, antispasmodic.

Chemical Constituents

Anethine, Phellandrene, Apiol.

குணம்

”வாதமொடு சூதிகா வாதம் சிரசுநோய்
மோதுசெவி நோய் கபநோய் மூடுசுரம் - ஓதுகின்ற
மூலக்கடுப்பு முதிர்பீநசம் போகும்
ஞாலச் சதகுப்பை நாடு.

- அகத்தியர் குணவாகடம்

வளிநோய், குருதிப் போக்கு, தலைவலி, காதுவலி, மூக்குநீர் பாய்தல், கீழ்வாய்க் கடுப்பு இவைகள் நீங்கும்.

கடுகு ரோகணி

Botanical Name	:	Picrorrhiza Kurroa
Family	:	Scrophlariaceae
Part used	:	Root
Suvai	:	kaippu, Karppu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Anti periodic, Cathartic, Stomachic

Chemical Constituents

Picrorhizin, Kutkin, Kutkisterol

குணம்

“மாந்தஞ் சுரமையம் வாயுகரப் பானாமஞ்
சேர்ந்தமலக் கட்டு திரிதோடம் - பேர்ந்தபொட்டுப்
புண்வயிறு நோயிவைபோம் பொற்கொடியே - பேதியுண்டாம்
திண்கடுகு ரோகிணிக்குத் தேர்”

- அகத்தியர் குணவாகடம்

மாந்தம், சுரம், ஐயப்பெருக்கு, கரப்பான், சீதக்கழிச்சல், வயிற்றுவலி, புண்கள், வளிநோய்கள் நீங்கும்.

சித்திரமூலம் (Ceylon lead wort)

English Name	:	Ceylon lead wort
Botanical Name	:	Plumbago zeylanica
Family	:	Plumbaginaceae
Part used	:	Root
Suvai	:	Karppu, Viruviruppu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Anti periodic, Diaphoretic.

Chemical Constituents

Plumbagin

குணம்

"கட்டிவிர ணங்கிரந்தி கால்கள் அரையாப்புக்
கட்டிச்சூ லைவீக்கங் காழ்மூலம் - முட்டிரத்தக்
கட்டுநீ ரேற்றங் கனத்த பெருவயிறும்
அட்டுங் கொடிவேலி யாம் "

- அகத்தியர் குணவாகடம்

கட்டி, புண், கழலை, வளிநோய், அரையாப்புக் கட்டி, குத்தல், சோபை, மூலரோகம், உதிரக்கட்டு, நீரேற்றம், பெருவயிறு நீங்கும்.

புன்னைநெய்

Botanical Name	:	Celophyllum Apatalum
Family	:	Guttiferae
Part used	:	Oil
Suvai	:	Kaippu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Anthelmintic, Caustic.

குணம்

"புன்னையிலுண் டாநெய்யாற் பொங்குசந்தி பாதமுதன்
மன்னியலைக் குங்கொடிய வாய்வுமுன் - பின்னிசிவும்
பொல்லா வலியினமும் புண்கிருமி யுந்தொலையும்
அல்லார் குழல்! அறி

- அகத்தியர் குணவாகடம்

முப்பிணி, பெருவளிநோய்கள், முன்னிசிவு, பின்னிசிவு, ஐவகை வலி, புண் , புழுக்கள் நீங்கும்.

புங்குநெய்

Botanical Name	:	Pongamia Pinnata
Family	:	Fabaceae
Part used	:	oil
Suvai	:	Kaippu, Thuvarppu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Anti septic, stimulant

Chemical Constituents

Karanjin, pongamol, glabrin.

குணம்

"அங்க மழகிடும்வெற் பாம்புங்கி னெய்தனக்குத்
தங்கம்போற் காந்தியது தானுண்டாந் - திங்கண்முக
மானே! கரப்பான்போம் வந்த சொறியுஞ்சிரங்குந்
தானே விலகுமெனச் சாற்று"

- அகத்தியர் குணவாகடம்

அழகும், ஒளியும் உண்டாகும். கரப்பானும் சொறி சிரங்கும் ஒழியும்.

வெள்ளுள்ளி (Garlic)

English Name	:	Garlic
Botanical Name	:	Allium Sativum
Family	:	Alliaceae
Part used	:	Bulb (குமிழ்தண்டு)
Suvai	:	Karppu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Carminative, stomachic, tonic, alterative, stimulant, expectorant, diuretic, anthelminitic.

Chemical Constituents

Allicin, Allisatin.

குணம்

"சந்நியொடு வாதந் தலைநோவு தாள்வலி
மன்னிவரு நீர்க்கோவை வன்சீதம் - அன்னமே !
உள்ளுள்ளி கண்பாய் உளைமூல ரோகமும் போம்
வெள்ளுள்ளி தன்னால் வெருண்டு"

- அகத்தியர் குணவாகடம்

முப்பிணி, வளிநோய்கள், தலைநோவு, வாய்நோய், நீரேற்றம், சீதக்கழிச்சல் மூலம் இவைகள் நீங்கும்.

ஓமம் (Bishops Weed)

English Name : The Bishops Weed
Botanical Name : Trachyspermum Ammi
Family : Umbelliferae
Part used : Seed
Suvai : Karppu
Thanmai : Veppam
Pirivu : Karppu

Therapeutic Action

Stomachic, antispasmodic, carminative, anti septic, stimulant, tonic, sialogogue.

Chemical Constituents

Thymol

குணம்

"சீதசுரங் காசஞ் செரியாமந் தம்பொருமல்
பேதியிரைச் சல்கடுப்பு பேராமம் - ஓதிருமல்
பல்லொடுபல் மூலம் பகமிவைநோ யென் செயுமோ?
சொல்லொடுபோம் ஓமமெனச் சொல் "

- அகத்தியர் குணவாகடம்

ஐயசுரம், இருமல், செரியாமந்தம், பொருமல், கழிச்சல், ஊழி, குடலிரைச்சல், இரைப்பு, பல்நோய், குய்யரோகம் இவைகள் போகும்.

கிராம்பு (Cloves)

English Name : Cloves
Botanical Name : Syzyggium aramaticum
Family : Myrtaceae
Part used : Dried buds (உலர்ந்த பூ மொட்டுகள்)
Suvai : Karam & Viruviruppu
Thanmai : Veppam
Pirivu : Karppu

Therapeutic Action

Anti spasmodic, Carminative, Stomachic.

Chemical Constituents

Eugenol, Caryophyllene, Eugenin.

குணம்

"பித்தமயக்கம் பேதியொடு வாந்தியும் போம்
சுத்தவிரத் தக்கடுப்புந் தோன்றுமோ - மெத்த
இலவங்கங் கொண்டவருக் கேற்சுகமாகும்
மலமங்கே கட்டுமென வாழ்த்து"

- அகத்தியர் குணவாகடம்

மயக்கம், பேதி, வாந்தி, குருதிக் கழிச்சல், நாட்பட்ட கழிச்சல், எருவாய்க் கடுப்பு இவைகள் நீங்கும்.

பெருங்காயம் (Asafoetida)

English Name	:	Asafoetida
Botanical Name	:	Ferula Asafoetida
Family	:	Apiaceae
Part used	:	Gum (பிசின்)
Suvai	:	Kaippu, karakarapu
Thanmai	:	Veppam
Pirivu	:	Karppu

Therapeutic Action

Stimulant, carminative, antispasmodic, expectorant, laxative, anthelmintic, diuretic, aphrodisiac, emmenagogue.

Chemical Constituents

Umbelliferone, sulphur, ferulic acid.

குணம்

"தந்தவே தந்த மூலத்தெழும் பிணி
சருவகாளம் விருச்சிகங்கீடம்மா

மந்தம் வாதம் உதாவர்த்தம் அல்குல்நோய்
மார்பணங்கட்ட குன்மம்மகோதரம்
உந்துகெர்ப்பத்தின் வித்திரஞ்சூலைச்சூர்
உதிரப்பூச்சி சிலேத்துமத்துறும் வலி
வந்தமெய்க்கடுப் போடிவைமுற்றுமே
மாயுநாறுநற் காயங்கிடைக்கினே"

- தேரையர் குணவாகடம்

பல், பல்லடிநோய், பாம்பு நஞ்சுகள், தேள் நஞ்சு, மந்தம், ஏப்பம், வாதம், சூதக வாயு, குன்மம், பெருவயிறு, சூதகச் சூலை, குருதியிலுள்ள நுண்புழு, ஐயத்தால் பிறந்த வலிகள், உடல் கடுப்பு இவைகள் நீங்கும்.

எள் நெய் (Gingilee oil)

English Name	:	Gingilee Oil
Botanical Name	:	Sesamum indicum
Family	:	Pedaliacea
Part used	:	Oil
Suvai	:	Inippu
Thanmai	:	Veppam
Pirivu	:	Inippu

Therapeutic Action

Demulcent, Laxative, Nutritive, Emollient.

Chemical Constituents

Sesamin, Sesamolin, Phytosterol, Vitamin E.

குணம்

"புத்திநயனக்குளிர்ச்சி பூரிப்பு மெய்ப்புளகஞ்
சத்துவங் கந்தி தனியிளமை - மெத்தவுண்டாங்
கண்ணோய் செவிநோய் கபாலவழல் காசநோய்
புண்ணோய்போ மெண்ணெய்யாற் போற்று"

- அகத்தியர் குணவாகடம்

புத்திக்குத் தெளிவு, விழிகளுக்குக் குளிர்ச்சி, உடல்பூரிப்பு, உடல் வன்மை ஆகியவற்றைத் தருவதோடு கண்ணோய், காதுநோய், தலைக் கொதிப்பு, சொறி சிரங்கு, புண் முதலியவைகளைப் போக்கும், இருமலைத் தணிக்கும், மன மகிழ்ச்சியைத் தரும்.

Annexure - II

Govt. Siddha Medical College, Palayamkottai

Bio- Chemical Analysis of

Mudakku Vatha Chooranam

Preparation of the extract

5 gms of Choornam was weighed accurately and placed in a 250ml beaker. Then 50 ml distilled water is added and dissolved well. Then it is boiled well for about 10 minutes. It was cooled and filtered in a 100ml volumetric flask and then it is made up to 100 ml with distilled water. This fluid is taken for analysis.

Qualitative analysis:

S.No	Experiment	Observation	Inference
1.	**Test for Calcium** 2ml of the above prepared extract is taken in a clean test tube. 2 ml of 4% Ammonium oxlate solution is added to it	No white precipitate is formed	Absence of Calcium
2.	**Test for Sulphate** 2ml of the extract is added to 5% barium chloride solution	A white precipitate is formed	Presence of Sulphate
3.	**Test For Chloride** The extract is treated with silver nitrate solution	No precipitate is formed	Absence of chloride
4.	**Test for Carbonate** The substance is treated with concentrated HCL.	No brisk effervescence is formed	Absence of Carbonate

5.	**Test for Starch** The extract is added with weak iodine solution	No blue colour is formed	Absence of Starch
6.	**Test for Iron** Ferric: the extract is treated with glacial acid and potassium Ferro cyanide	No blue colour is formed	Absence of Ferric iron.
7.	**Test for Iron Ferrous** The extract is treated with concentrated Nitirc acid and ammonium thio cyanide	Blood red colour is formed	Indicates trace amount of Ferrous is present
8.	**Test for Phosphate** The extract is treated with ammonium Molybdate and concentrated nitric acid	No yellow precipitate is formed	Absence of Phosphate
9.	**Test for Albumin** The extract is treated with Esbach's regent	No yellow precipitate is formed	Absence of Albumin
10	**Test for Tannic Acid** The extract is treated with ferric chloride	No blue black precipitate is formed	Absence of Tannic Acid
11.	**Test for unsaturation** Potassium permanganate solution is added to the extract	It gets decolourised	Absence of unsaturated compound
12.	**Test for the Reducing Sugar** 5 ml of Benedict's qualitative solution is taken in a test	Colour change occurs	Indicated the presence of reducing sugar

	tube and allowed to boil for 2 mts and added 8-10 deops of the extract and again boil it for 2 minutes		
13.	**Test for Amino Acid** One or two drops of the extract is placed on a filter paper and dried it well after drying 1% Ninhydrin is sprayed over the same and dried it well	Violet colour is formed	Indicated the presence of Amino Acid

ANNEXURE III

PHARMACOLOGICAL ANALYSIS

ANALGESIC ACTION OF

MUDAKKU VATHA CHOORANAM

Introduction

According to siddha medicine the Muddakku vatha chooranam is indicated in vatha diseases. From this indication the drug Muddakku vatha chooranam might possess analgesic activity.

Aim

To study the analgesic effect of Muddakku vatha chooranam on albino rats by tail flick method

Materials and Methods

Preparation of the test drug

100mg of Muddakku vatha chooranam was suspended in 10 ml of water as suspending agent. This 1 ml contained 100mg of the test drug.

Equipement

Hot water bath

Procedure

Six male albino rats (weighing 80 -100gms) were used in three groups. The animals were allowed to free access to food and water until they brought for the experiment. The animals which showed the positive response to the stimulus within a given time were selected for the study.

After the selection of animals which were responding to stimulus within 2 seconds, they were divides in to 3 groups, each group consisting of two rats.

The hot water was maintained at 55°C. The tip of the tail was immersed into the water bath and the time was noted when the rat flicked the tail.

First group was administered with Muddakku vatha chooranam at a dose of 100mg / 100 gm body weight of the animal.

Second group was administered with paracetamol at a dose of 20mg /100gm of body weight. Third group was given to the 1 ml of water and kept as control.

After the drug administration, the reaction time of each rat after half an hour and one hour were noted in each group (when a rat fails to flick the tail, it should not be continued beyond 8 seconds to avoid injury) and the average was calculated.

The results of control group, standard group and drug treated group were tabulated and compared.

Results

Effect of mudakku vatha chooranam

Serial No	Name of the drugs / Groups	Dose / 100 gram body weight	Initial reading	After drug Administration			Mean difference	Remarks
				½ hr. Average	1 hr Average	1½ hr Average		
1	Mudakku Vatha Chooranam	100 mg / 1ml	3.0	3.5	4.5	5.5	-	Significant
2.	Paracetamol	20mg / 1ml	2.5	4.0	5.0	6.5	-	
3.	Water	1ml	2.5	2.5	2.5	3.0	-	

Inference

From the above tabulation it is noted that Muddakku vatha chooranam has **significant analgesic action**.

ANTI - PYRETIC STUDY ON MUDDAKKU VATHA CHOORANAM

Aim

To study the anti-pyretic activity of the Muddakku vatha chooranam.

Procedure

Three groups of healthy albino rats were taken, each weight about 100 – 200 gm and divided into three groups, each group consists of two rats . All the rats were made hyperthermic by subcutaneous injection of 12% suspension of yeast at a dose of 100mg / 100ml of body weight.

10 hours later one group of rats were given the test drug (Muddakku vatha chooranam) at a dose of 200mg/ 100gm of body weight. The other group received distilled water at a dose of 2ml / rat and kept as control. The last group was given paracetamol at a dose of 20mg / 100gm of body weight and kept as standard.

The mean rectal temperature for 3 groups was recorded at 0 hour, 1½ hours, 3 hours, and 4½ hours after the drug administration. The difference between the mean temperature of the control group, standard and the test drug were noted and compared.

Effect of mudakku vatha chooranam

Serial No	Name of the drugs / Groups	Dose / 100 gram body weight	Initial temperature in Centigrade	After drug Administration			Mean difference	Remarks
				1½ hr. Average	3.0 hr Average	4½ hr Average		
1	Mudakku Vatha Chooranam	100 mg / 1ml	36.5	36.0	35.0	34.5	-	Significant
2.	Paracetamol	20mg / 1ml	37.5	36.0	35.5	34.0	-	
3.	Water	1ml	37.0	37.5	38.0	39.0	-	

Inference

The test drug Muddakku vatha chooranam has **significant antipyretic action**.

ACUTE ANTI – INFLAMMATORY STUDIES ON MUDAKKU VATHA CHOORANAM

Aim

To study the acute anti – inflammatory effect on Muddakku vatha chooranam.

Method:

The acute anti – inflammatory activity of Muddakku vatha chooranam was screened by rat Hind paw oedema method.

Preparation of the test drug

200 mg of Mudakku vatha chooranam was suspended in 10 ml of water. From the above test drug 1ml was administered orally and this 1ml contain 100mg Mudakku vatha chooranam.

Procedure

The anti-inflammatory activity of mudakku vatha chooranam was studied in healthy Albino rats weighing 100 – 150 gms . Six rats were selected and divided into three groups, each containing three rats. The first group was given distilled water 1ml, internally and was kept as control. The second group was given the test drug at a dose of 100mg/ 100gms, body weight . The third group was given ibubrufen at a dose of 20mg / 100g body weight.

Before administration of the drug, the hind paw volume of all rats were measured by dipping the hind paw upto the tibiodorsal junction in a mercury plethysmography. Soon after measurement, the drug was administration internally.

An hour after adminstration of the drugs a subcutaneous injection of 0.1 ml . Of 1% W/V of carrageenin in water was injected in the plantar surface of both the hind-paw and volume was measured once again. The difference between the initial and final volumes would show the amount of inflammation. Taking the volume in the control group as 100% of inflammation, the inflammation or anti–inflammatory effect of the drug was calculated. Tabulations of the results were recorded.

Results

Effect of Mudakkuvatha chooranam

Serial No	Name of drug / groups	Dose / 100 gram body weight	Initial Reading average	Final reading average	Mean difference	Percentage Inflammation	Percentage Inhibition	Remarks
1.	Mudakku vatha chooranam	100mg / 1ml	0.8	1.2	0.4	44.5	55.5	Moderate
2.	Ibu brufen	20mg / 1ml	0.80	0.85	0.05	6.25	93.75	
3.	Water	1ml	0.65	1.5	0.85	100.0	-	

Inference

From the above experiment it is observed that the test drug Mudakkuvatha chooranam has **moderate acute anti inflammatory action**.

CHRONIC ANTI INFLAMMATORY STUDY BY COTTON - PELLETS GRANULOMA METHOD

Aim

To study the chronic anti inflammatory activity of the drug in albino rats by cotton pellets implantation (granuloma) method.

Procedure

Cotton pellets each weighing 10mg were prepared and sterlised in an autoclave for about one hour under 15 lbs atmosphere pressure. Six albino rats each weighing between 100 – 200gms were selected and were divided into 3 groups . Each rat was anaesthetized with ether and cotton pellets were implanted subcutaneously in the groin, two in each side.

From the day of implantation, one group of animals received mudakku vatha chooranam at a dose of 200mg of body weight. Another group of animals were received distilled water. Last group was given ibubrufen at dose of 20mg/100gm body weight.

On the eighth day the rats were sacrificed and the pellets were removed weighed. Then they were put in a incubator at 60°C - 80°C and then weighed.

The concordant weight was noted for all groups and compared.

The effect of mudakku vatha chooranam in chronic anti inflammatory study.

Results

Effect of Mudakkuvatha chooranam

Serial No	Name of drug / groups	Dose / 100 gram body weight	Pellet weight	Pellet weight of the Granuloma of drugs	Mean difference	Percentage Inflammation	Percentage Inhibition	Remarks
1.	Mudakku vatha chooranam	100mg / 1ml	10mg	155mg	-	62	48	Moderate
2.	Ibu brufen	20mg / 1ml	10 mg	56 mg	-	22.4	77.6	
3.	Water	1ml	10mg	250mg	-	100.0	-	

Inference

The mudakku vatha chooranam show **moderate chronic anti inflammatory action**.

ANTI – INFLAMMATORY STUDIES ON VATHA THYLAM

Procedure

Anti-inflammatory activity of vatha thylam was studied in healthy albino rats, weighing between 100 – 150 gms. For studying acute inflammation, rat hind paw oedema method was used.

Six albino rats were selected and divided into three groups each containing two rats. To first group distilled water was given and kept as control. Before the application of the drug, the hind paw volume of all rats were measured. This was done by dipping the hind paw upto the tibiodorsal junction in Mercury plethysmograph.

Subcutaneous injection of 0.1% of carrageenin (W/V) in water was made into plantar surface of both the hind paw of each rat. To the test group, Vatha thylam was topically applied frequently over the inflamed surface in a thin layer. To the control group, no drug was applied over the inflamed surface. One and helf hours after injection the hind paw volume was measured once again. The difference between the initial and final volumes would shows the amount of inflammation.

Taking the volume in the control group as 100% of inflammation, the inflammation or anti-inflammatory effect of the group is calculated.

Results

Effect of Vatha thylam

Serial No	Name of drug / groups	Dose / 100 gram body weight	Initial Reading average	Final reading average	Mean difference	Percentage Inflammation	Percentage Inhibition	Remarks
1.	Vatha thylam	External	0.9	1.1	0.2	22.2	77.8	Significant
2.	Ibu brufen	20mg / 1ml	0.80	0.85	0.05	6.25	93.75	
3.	Water	1ml	0.65	1.5	0.85	100.0	-	

Inference:

It is observed that Vatha Thylam has **significant anti-inflammatory action**.

Annexure - IV

CASE SHEET PROFORMA FOR VALI AZHAL KEEL VAYU

GOVERNMENT SIDDHA MEDICAL COLLEGE,

DEPARTMENT OF POST GRADUATE

PALAYAMKOTTAI, TIRUNELVELI.

BRANCH III – SIRAPPU MARUTHUAM

I.P.No	:	Occupation	:
Bed. No	:	Income	:
Ward	:	Nationality	:
Name	:	Date of admission	:
Age	:	Date of discharge	:
Sex	:	Diagnosis	:
Permanent address	:	Result	:
		Medical officer	:

Temporary address :

Complaints and duration

History of Present illness

Personal history and Habit

Family History

General condition on Examination

Consciousness

General appearance

Stature

Nourishment

Skin changes

Facies

Pallor

Jaundice

Cyanosis

Clubbing

Lymphadenopathy

Abdominal distension

Jugular venous pulsation

Engorged veins

Koilonychia

Pedal oedema

Generalised oedema

Temperature

Pulse

- Rate
- Rhythm
- Volume
- Character
- Peripheral pulses
- Pulses paradoxus

Respiration

- Rate
- Rhythm
- Character

Heart rate

Blood pressure

Miscellaneous

சித்த முறை தேர்வுகள்

1. நிலம்

குறிஞ்சி

முல்லை

மருதம்

நெய்தல்

பாலை

2. பருவ காலம்

கார் காலம் (ஆவணி - புரட்டாசி)

கூதிர் காலம் (ஐப்பசி - கார்த்திகை)

முன்பனி (மார்கழி - தை)

பின்பனி (மாசி - பங்குனி)

இளவேனில் (சித்திரை - வைகாசி)

முதுவேனில் (ஆனி - ஆடி)

3. யாக்கை (உடல்)

வாதம்

பித்தம்

கபம்

கலப்பு

4.குணம்

சத்துவ குணம்

இரசோ குணம்

தமோ குணம்

5.பொறி , புலன்கள்

மெய் (தொடு உணர்வு)

வாய் (சுவை)

கண் (பார்வை)

மூக்கு (நாற்றம்)

செவி (கேட்டல்)

6. கன்மேந்திரியம்/ கன்மவிடயம்

கை (தானம்)

கால் (கமனம்)

வாய் (வசனம்)

எருவாய் (விசர்க்கம்)

கருவாய் (ஆனந்தம்)

7. உட்காய அதக்காயம்

புயம்

சயம்

கால்

பாதம்

8. மும்மலம்

மலம்

மூத்திரம்

வியர்வை

9. பிற உறுப்புகளின் நிலை

இருதயம்

புப்புசம்

இரைப்பை

கல்லீரல்

மண்ணீரல்

சிறுகுடல்

பெருங்குடல்

சிறுநீரகம்

சிறுநீர்ப்பை

மூளை

கருப்பை

10. உயிர்த்தாதுக்கள்

a) வாதம்

பிராணன்

அபானன்

வியானன்

உதானன்

சமானன்

நாகன்

கூர்மன்

கிருகரன்

தேவதத்தன்

தனஞ்செயன்

b) பித்தம்

அனற் பித்தம்

இரஞ்சக பித்தம்

சாதக பித்தம்

ஆலோசக பித்தம்

பிராசக பித்தம்

c) கபம்

அவலம்பகம்

கிலேதகம்

போதகம்

தற்பகம்

சந்திகம்

11. உடல் தாதுக்கள்

சாரம்

செந்நீர்

ஊண்

கொழுப்பு

என்பு

மூளை

சுக்கிலம் / சுரோணிதம்

12. எண் வகைத் தேர்வுகள்

நாடி

ஸ்பரிசம்

நா

நிறம்

மொழி

விழி

மலம்

நிறம்

எடை

இறுகல்

இளகல்

மூத்திரம்

அ. நீர்க்குறி

நிறம்

மணம்

எடை

நுரை

எஞ்சல்

ஆ.நெய்க்குறி

Laboratory Investigation

Blood

TC : cells / cu. mm

DC : P %

L %

E %

ESR

½ hour : mm

1 hour : mm

Hb

Blood sugar : F / PP / R

Serum cholesterol

Uric acid

Urea

VDRL

Urine

Albumin

Sugar

Deposits

Motion

Ova

Cyst

Immunological

RA factor

Radiographic evaluation

Serological test for syphilis

Synovial fluid analysis

Arthrography

Locomotor system

Inspection

- Overlying skin
- Colour
- Scars and ulcers
- Periarticular swelling

Bones

- Deformity
- Unusual feature
- Muscle changes
- Symmetrical distribution
- Joint movement
- Gait

Palpation

- Skin temperature
- Soft tissues
- Bony enlargement
- Crepitation
- Subcutaneous nodules
- Rheumatoid vasculitic lesions
- Lymphadenopathy
- Pitting oedema

RANGE OF MOVEMENT

Examination of individual Joints

Cervical spine

Thoracic spine

Lumbar spine

Sacroiliac joint

Shoulder joint

Elbow joint

Wrist joint

Interphalangeal joint

Hip joint

Knee joint

Metatarso phalangeal joint

Examination of individual joints (Affected joints)

Measurement

Knee joint

Ankle joint

Wrist joint

Elbow joint

Index finger

Middle finger

Ring finger

Little finger

Examination of other system

Respiratory system

Cardiovascular system

Gastro intestinal system

Central nervous system

Signs and Symptoms

Management:

DAILY PROGRESS

Date	Symptoms	Drug

GOVERNMENT SIDDHA MEDICAL COLLEGE

HOSPITAL

POST GRADUATE RESEARCH CENTRE

BRANCH - III SIRAPPU MARUTHUVAM

PALAYAMKOTTAI, TIRUNELVELI - 627 002.

ADMISSION - DISCHARGE SHEET FOR " VALI AZHAL KEEL VAYU"

I.P. No	:	Occupation	:
Bed no.	:	Income	:
Ward	:	Nationality	:
Name	:	Religion	:
Age	:	Date of admission	:
Sex	:	Date of discharge	:
Permanent address	:	Diagnosis	:
		Result	:
		Medical officer	:

Temporary address

CLINICAL PICTURES

SI. No.	During Admission	During Discharge

PLACE:

DATE:

Signature of the medical officer

BIBLIOGRAPHY

1. Gunapadam – Mooligai – Dr.Murugesa Mudaliyar
2. Kannusamiyam ennum vaithya sekaram
3. Man murugiyam ennum tamil maruthuva nool
4. Noi naadal Noi mudhal naadal I & II – Dr.M.Shunmuga Velu H.P.I.M
5. Pathartha Guna vilakkam
6. Siddha Maruthuvam – Dr. Kuppusamy Mudhaliyar
7. Siddha maruthuvanga churukkam – Dr.K.S. Uthamarayan
8. Thirumoolanayanar Sikicha ratna theepam
9. Yugi Vaidhya Chinthamani
10. Agathiyar 2000 I,II Part
11. Theriyar Vagadam
12. Yugi munivar perunool vaidhya kaviyam 1000
13. Sathaganadi
14. Agathiyar Nadi
15. Agathiyar Gunavagada thirattu
16. Agathiyar vaidhya vallathy 600
17. Davidsons principles and practice of medicine – 19th edition
18. CECIL Text book of medicine.
19. Text book of orthopaedics and trauma – G.S.Kulkarni
20. Mercer's orthopaedics surgery book
21. Harrison's Text book of medicine
22. Wealth of India
23. Pharmacopoeial standards of herbal plants
24. T.V.Samba sivam pillai Tamil – English Dictionary
25. Indian Medicinal Plants
26. Essentials of medical physiology – K.Sembulingam
27. Fundamentals of Biochemistry for medical students – Ambika Shanmugam

28. Text Book of Medicinal Botany – Dr.S.Somasundaram
29. www.wikipedia.org
30. www.yogaonline.com
31. www.photos.google.com

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CASE SUMMARY OF IN-PATIENTS

S.no	I.P. No	Name	Age/Sex	Duration of Illness	Date of admission	Date of Discharge	No.of Days Treated	Treatment with Medicine dose	Result
1	783	Maria	36/F	1Year	12.04.06	27.4.06	15	Mudakku vatha chooranam 650mg -1300mg thrice a day with Honey or Hot water (Internally) Vatha Thylam (Externally)	CR
2	931	Sukumari	25/F	6months	24.04.06	23.05.06	30		CR
3	999	Kanagalakshmi	50/F	2months	02.05.06	23.05.06	21		CR
4	1062	Subhulakshmi	27/F	3months	11.05.06	29.05.06	18		PR
5	165	Kuppammal	44/F	7years	19.07.06	30.08.06	42		CR
6	2325	Pappa	42/F	6months	19.10.06	01.11.06	45		PR
7	2461	Pappa	40/F	6months	06.11.06	15.11.06	09		PR
8	2531	Lakshmithai	50/F	1year	15.11.06	31.11.06	16		CR
9	2446	Narayanavadivu	63/F	3 ½ years	03.11.06	04.12.06	31		CR
10	2719	Gnanapoo	75/F	3months	29.11.06	09.12.06	10		PR
11	2849	Kodiyan	60/M	2years	13.12.06	01.01.07	19		PR
12	2642	Sankaravadivu	72/F	1year	21.11.06	16.12.06	25		CR
13	2352	Balakrishnan	60/M	1year	23.10.06	10.12.06	48		CR
14	2869	Essakiammal	40/F	2years	14.12.06	12.01.07	29		CR
15	2857	Alagammal	65/F	6months	13.12.06	22.01.07	40		CR
16	2953	Lakshmi	60/F	2years	24.12.06	16.01.07	23		CR
17	64	Packiam	50/F	3years	10.01.07	10.02.07	31		CR
18	2849	Chellammal	45/F	3months	10.01.07	01.02.07	22		CR
19	22	Arumugam	71/M	4years	08.01.07	22.01.07	14		CR
20	338	Avudaiammal	35/F	8months	13.02.07	27.01.07	44		PR

CR - Clinically Relieved

PR - Partially Relived

CASE SUMMARY OF OUT PATIENTS

S.no	O.P. No	Name	Age/Sex	Duration of Illness	No. of Days Treated	Treatment with Medicine dose	Result
1	62304	Rukmani	30/F	3Years	39	Mudakku vatha chooranam 650mg - 1300mg thrice a day with Honey or Hot water Internally) Vatha Thylam (Externally)	CR
2	69980	Mayandi	42/M	3months	53		CR
3	41648	Saral	43/F	3years	55		CR
4	45150	Andal	29/F	6months	38		PR
5	71110	Jasmine	40/F	1year	47		CR
6	66662	Arunachalam	55/F	3years	39		CR
7	68771	Visalatchi	37/F	10days	57		CR
8	66705	Rajam	29/F	2years	43		PR
9	63504	Muthulakshmi	28/F	4months	38		CR
10	2376	Somasundaram	46/M	2months	32		PR
11	219	Joy	40/F	1month	35		CR
12	2403	Aandal	58/F	1month	32		CR
13	68509	Devi	25/F	1year	59		CR
14	76343	Piramu	52/F	6months	33		PR
15	70805	Subbiah	57/M	2years	55		CR
16	71151	Indhrani	50/F	3years	54		CR
17	72525	Muthammal	50/F	10years	42		PR
18	76366	Alice	40/F	4months	40		CR
19	71126	Aachiappan	45/M	15days	48		CR
20	44468	Sudalaivadivu	24/F	6years	42		PR

CR - Clinically Relieved

PR - Partially Relived

Right Side Measurement (in inches) before and After Treatment

S.No	IP NO	Knee Joint		Ankle Joint		Wrist Joint		Index Finger		Middle Finger		Ring Finger		Little Finger	
		BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	783	12	11	8	7.5	6.5	6	2.5	2.1	2.3	2	2.5	2.1	1.9	1.7
2	931	12.5	12	9	8.5	7.1	6.8	2.3	2	2.2	2.1	2.3	2.1	1.8	1.6
3	999	13	11	7.8	7.5	6.5	6	2.2	2.1	2.5	2.3	1.8	1.5	1.6	1.4
4	1062	12	11.5	8.5	8	7.5	7	2.5	2.3	2.1	2	2.2	2	1.8	1.6
5	165	12.5	12	9	8.5	6.8	6.5	2.1	2	2.6	2.3	2.1	1.8	1.6	1.4
6	2325	13	12.5	9.5	9	6.5	6.3	2.3	2.1	2.4	2.2	2.3	2.1	2	1.8
7	2461	13.5	12.5	10	9	7.6	7.2	2.5	2.3	2.3	2.1	2.5	2.3	1.6	1.2
8	2531	13	12.5	9.5	8	7.2	7.1	2.3	2.1	2.2	2	2.1	1.8	1.6	1.4
9	2446	14	13	11	10.5	6.5	6.2	2.4	2.2	2.6	2.2	2.5	2.3	2	1.8
10	2719	13.5	12.5	10.5	10	7.4	7.1	2.5	2.1	2.4	2.1	1.6	1.4	1.8	1.6
11	2849	11.5	10.5	10	9.5	7.5	7.2	2.6	2.2	2.1	1.8	1.8	1.4	1.6	1.1
12	2642	13.5	12.5	12.5	11.5	7.6	7.1	2.2	2	2.5	2.1	1.4	1.1	1.8	1.6
13	2352	14	13.5	9.5	9.1	7.2	7	2.5	2.3	2.6	2.4	1.6	1.4	1.8	1.5
14	2869	12.5	12	10.5	10.3	7.1	6.5	2.6	2.4	2.5	2.3	1.5	1.3	1.4	1.2
15	2857	13	12.5	8	7.5	6.8	6.5	2.2	2	2.6	2.2	2.1	2	1.5	1.3
16	2953	14	13	11.5	10.5	7.4	7.1	2.4	2.1	2.3	2.1	2.3	2.1	1.8	1.6
17	64	13.5	12.5	10.5	10	7.2	7	2.5	2.3	2.1	1.8	2.1	1.6	1.2	1
18	2849	13	12.5	9.5	9	7	6.5	2.2	2	2.6	2.2	1.8	1.5	1.8	1.6
19	22	14	13.5	10	9.5	7.4	7	2.4	2.2	2.1	1.8	1.4	1.1	1.5	1.1
20	338	13	12	9	9	7.4	7.3	2.3	2.1	2.4	2.2	1.6	1.4	1.6	1.3

BT – Before Treatment
AT – After Treatment

Left Side Measurement (in inches) before and After Treatment

S.No	IP NO	Knee Joint		Ankle Joint		Wrist Joint		Index Finger		Middle Finger		Ring Finger		Little Finger	
		BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT	BT	AT
1	783	11.5	11	8	7.6	6.6	5.8	2.5	2.3	2.6	2.2	2.5	2.3	1.8	1.6
2	931	13	12.5	10.5	10	6.8	6.5	2.3	2.1	2.3	2.1	1.8	1.6	1.6	1.4
3	999	12.5	11.5	9.5	9.1	7.2	6.8	2.4	2.2	2.2	2	2.2	1.8	2.3	2.1
4	1062	11.5	11	9	8.5	7.6	7.2	2.5	2.3	2.4	2.2	2.1	1.6	2.2	2
5	165	10.5	10	10.5	10	7.2	6.8	2.6	2.4	2.6	2.2	2.2	2	1.6	1.4
6	2325	12.5	12	11.	10.5	6.5	6.2	2.1	1.8	2.5	2.1	2.5	2.2	2.3	2.1
7	2461	12	11.5	9.5	9	5.7	5.5	2.3	2	2.2	1.8	2.3	2.2	1.8	1.5
8	2531	13.5	13	10.5	10	7.8	7.5	2.5	2.1	2.6	2.2	2.1	1.5	2.1	1.8
9	2446	13	12.5	10	9.5	7	6.5	2.3	1.8	2.4	2.1	2.4	1.8	2.5	1.9
10	2719	12.5	12	8	7.5	6.6	6.2	2.5	2.2	2.2	1.6	2.6	2.1	1.6	1.4
11	2849	13.5	13	9.5	9	7.2	7	2.4	2	2.4	1.8	2.3	1.6	1.8	1.5
12	2642	14.	13.5	10.5	10	7.6	7.2	2.3	2.1	2.3	1.5	2.6	2.2	1.8	1.6
13	2352	12.5	12	11	10.5	7.2	7	2.1	1.8	2.5	2	2.4	2	2.2	2
14	2869	13	12.5	9.5	9.3	6.4	6.2	2	1.8	2.3	2.1	2.2	1.8	2.4	2.1
15	2857	13.5	13	10.5	10.1	7.5	7.2	2.5	2.3	2.6	2.3	2.5	2.3	1.6	1.2
16	2953	11.5	11	11.5	11.2	6.8	6.5	2.3	1.8	2.3	2.1	2.1	1.8	2.3	2.1
17	64	13.5	12.5	8.5	8.2	7	6.5	2.2	1.6	2.4	2.1	2.3	1.6	2.1	1.8
18	2849	12.5	12	10.5	10.2	7.2	6.5	2.5	1.8	2.2	1.6	2.1	1.8	2.5	2.3
19	22	14	13.5	9.5	9.3	6.4	6.2	2.3	1.6	2.6	2.2	2.2	2	2.3	2.1
20	338	13.5	13	11.5	11.2	6.6	6.2	2.1	1.5	2.1	1.8	2.5	2.1	1.6	1.8

BT – Before Treatment
AT – After Treatment